

Playford Trust



Playford Trust Awards Scholars' Biographies 2021



Playford Trust Regional Science & Engineering Scholarships

Rory Bowles

Bachelor of Engineering (Civil) (Honours)
Flinders University

Rory grew up on a farm near Mount Compass, where he was an enthusiastic sporting competitor and developed a keen interest in science, design and mathematics.

In his final year at Tatachilla Lutheran College in 2020 he received Top of Subject awards for all five of his Stage 2 subjects. He also won the school cross country event in Year 12 and has been captain of his local tennis and football teams. He was a regular volunteer in the local community and at school, where he enjoyed helping his peers during and after classes.

According to a former teacher Rory is a natural leader who leads by example and is thus a "role model that other students would look up to". His "caring nature, leadership skills and a strong sense of humour have endeared him to staff and students alike".

He plans to become an efficient and creative engineer who can use his skills to benefit the wider community.

Joshua Graham

Bachelor of Science
University of Adelaide

Joshua attended Caritas College in Port Augusta and was elected 2020 School Captain. He received the St Mary Mackillop of the Cross-Leadership Award for his commitment to the Caritas school ethos, compassionate concern for those in need, and active participation in the school community.

He also received the Australian Defence Force Future Innovators award for demonstrating innovation and learning in the fields of science, technology and mathematics.

Joshua developed an interest in space science during Year 12 and hopes to transfer into the Bachelor of Science (Space Science and Astrophysics) degree. His aim is to contribute to the South Australian space industry and to developments such as Lot Fourteen.

The first in his family to attend university, he is respected as hard-working student who strives to achieve to the best of his abilities. Alongside Physics, he studied Chemistry, Mathematical Methods and Material Solutions in Year 12, and received an A+ for his research project about the possible impact self-driving cars on the need for driving qualifications.

Dana Hurrell

Bachelor of Science | Bachelor of Mathematical Sciences
University of Adelaide

Dana attended Saint Joseph's School in Port Lincoln, where she was the female School Captain and Performing Arts Captain in 2020.

She achieved subject Dux awards in Specialist Mathematics, Chemistry and Music (Solo Performance), and received the Mayor's Leadership and John Loller Christian Leadership awards. She also has a passion for music and is studying for Grade 7 AMEB piano, having been awarded Honours in Grades 5 and 6.

Dana has participated in many community outreach programs, including Fred's Van and the establishment of a Youth Group in Saint Mary of the Angels Catholic Church, Port Lincoln. She participated in the Queen's Baton Relay in 2018, was captain of Port Lincoln Swimming Club for three years and has worked as a swimming instructor and private piano teacher.

Dana aspires to become a secondary school teacher specialising in chemistry and mathematics. She is undertaking a Bachelor of Science (Advanced) and plans to then progress to a Master of Teaching.

Jack Read

Bachelor of Engineering (Honours)
Flinders University

Jack grew up in Middleton and attended Victor Harbor High School, where he soon showed an aptitude for maths.

In Year 12 he studied Mathematical Methods, Physics and Chemistry, receiving a subject award for Maths Methods, and the See Optometry Maths and Science Award for having the highest combined grade from any two maths or science subjects. As Specialist Maths was not offered face-to-face at the school he chose to study it at the nearby Investigator College – and won the subject award.

Jack is heavily involved in the community, volunteering for patrols, fundraisers and events, and taking on leadership roles with his local surf lifesaving club in Port Elliot, where he has earned qualifications in first aid and water safety.

He has had a lifelong love of sport and, alongside surf lifesaving, participates in running, jiu-jitsu, surfing and bike riding. He also plays drums in the Victor Harbor Granite Community Band, which performs regularly at public events and festivals.

Talia Robinson

Bachelor of Engineering (Honours)
University of Adelaide

Talia attended Port Lincoln High School where in 2019 she was named Dux of Year 11 and top achiever in Stage 2 Mathematical Methods as a Year 11 student. In her senior year in 2020, she was again Dux and received Merit Awards for outstanding achievement in Stage 2 Chemistry and Physics.

Alongside her studies, she enjoys playing the piano and taking part in team sports, including netball and basketball, and she has received a number of MVP and coaches' awards. She is respected as a diligent, respectful, humble and good-humoured person.

Talia is studying a double degree in a Bachelor of Chemical Engineering and Bachelor of Arts (Indonesian Studies), a combination she hopes will lead to an exciting and meaningful career. She aspires to improve practices of sustainability and resource management, to make a positive impact on the environment and, ultimately, to enrich the quality of human life through the knowledge acquired through her studies.

Isabella Trigwell

Bachelor of Science (Honours) (Biotechnology)
Flinders University

Isabella attended Whyalla's Samaritan College, where in 2020 she was Head Girl and Dux of the school. She also received the UniSA Whyalla Campus Award for Academic Excellence, the Eddie Hughes Award for Literary Analysis and Appreciation, and the Johnston Withers Lawyers Award for Excellence in Year 12 Legal Studies.

Isabella says her single father's success as a software developer motivated her from a young age to pursue a future in STEM. She now aspires to a career in academia and hopes that by completing an Honours research project she can broaden scientific knowledge regarding the medical applications of biotechnology.

Isabella took immense pride in her involvement in the school community and says she aims to further develop her leadership skills at university. Her role as Head Girl challenged her to collaborate regularly with teachers, SRC members, and external organisations to coordinate events and fundraisers. She also had the opportunity to develop skills in public speaking.

Playford Trust Honours Scholarships – University of South Australia

Jerusha King

Bachelor of Science (Honours)

Jerusha spent most of her childhood outdoors in Strathalbyn and developed a keen interest in nature and conservation. However, she did not initially consider the environmental sector as a career option and instead spent many years working in the financial sector. Although she found satisfaction in transforming clients' financial chaos into order and compliance, her role never quite fitted her core values and interests.

In 2016, Jerusha took a trip to Nepal to do some trekking. Observing the receding glaciers first-hand brought into focus the gravity of the global environmental crisis, and she made the decision to pursue a career in environmental science. She completed her Bachelor of Environmental Science while working and caring for her son, who has autism spectrum disorder. The highlight of her degree was participating in a group research project in Fiji, an experience that enabled her to gain field experience in a different cultural context and an unfamiliar ecological setting.

Jerusha's Honours research will measure the ecosystem impacts of the recent dieback of Stringybark trees in the Mount Lofty Ranges. Using remotely sensed data from satellite, drone and field micro-sensors, she will examine vegetation health, structure and microclimate within the stringybark ecosystem.

Eventually, Jerusha hopes to be able to apply her skills to the interface between environmental science and industry, promoting sustainable practices and management strategies that protect South Australia's natural assets.

Kane O'Brien

Bachelor of Engineering (Honours) (Electrical and Mechatronic)

Kane has a keen interest in the defence industry and has worked as an electrician and instrumentation technician on the Royal Australian Navy's Air Warfare Destroyer (AWD) project. He wanted to expand his knowledge of the electrical industry, and so returned to university, where he is now in his Honours year.

Serving his communities is very important to Kane, and he is a volunteer with the Tea Tree Gully State Emergency Service. This has enabled him to nurture his leadership potential. He is also involved in several student engagement projects around the university campus. He serves as both a "UniMentor Leader" and "Study Help Pal", connecting with new students, providing transitional support, and offering academic help to students needing assistance.

Kane's research interest is digital signal processing. In 2020, he received a University of South Australia Vacation Research Scholarship and conducted research into Synthetic Aperture Radar (SAR) imaging, using signal processing techniques. His final year project, in conjunction with Lockheed Martin Australia, is developing a software defined radio channeliser – first undertaking modelling and characterising in the programming and numeric computing platform Matlab, and then implementing a hardware solution.

Kane aims to obtain a higher degree through research before returning to the rapidly expanding defence and space industry in South Australia.

Playford Trust Honours Scholarships – Flinders University

Mitchell Griggs

Bachelor of Science (Honours) (Physics)

Mitchell is part of the Advanced Program for High Achievers in Physics, which is designed to develop students' skills in scientific research by providing opportunities to work alongside professional academics and investigate their own research projects.

Throughout his undergraduate years, he has achieved High Distinctions across all of his topics. He won the Michael Wills Prize in Physics and Astronomy and the Flinders Prize in Physics for achieving the best results of any student enrolled in the first- and second-year Flinders physics programs.

In his Honours project, he is researching the microscopic structure of the mineral pyrrhotite. It is hoped his project will develop the means to prevent acid mine drainage and its environmental consequences.

Although Mitchell has yet to decide on any specific career or study goals post-Honours, he says there are a range of pathways he might travel – including studying for a PhD, working with industry or government, or joining the education sector.

Susanna Grigson

Bachelor of Science (Honours) | Bachelor of Science

Originally from Loxton, Susanna moved to Adelaide in 2017 to pursue degrees in molecular biology and mathematics, and this unique combination has allowed her to attain knowledge in a broad range of scientific disciplines. She finds multidisciplinary problems exciting and aims to undertake a PhD so she can make contributions to biomedical and environmental science.

Susanna is a tutor for first-year biology and mathematics classes, facilitates science workshops for high school students and is involved in the Yunggorendi Tutorial Program, in which she helps improve the academic outcomes of Indigenous students.

During her undergraduate studies, she grasped opportunities to complete additional research projects – with organisations including the Institute of Mathematical Sciences in Malaysia, CSIRO's Transformational Bioinformatics group and the Australian Mathematical Sciences Institute. Her most recent project used mathematics to group proteins, with unknown functions, that are likely to perform similar biological roles. There are plans to publish this work, and that could speed up the process of determining the functions of unknown genes.

Susanna's Honours project will investigate the evolution of bacterial communities as they migrate through the environment. She will use both laboratory experiments and mathematical modelling to investigate how different environments drive bacterial evolution. The knowledge gained will improve our understanding of bacterial behaviours fundamental to ecology, biotechnology and human health.

Adam Perryman

Bachelor of Engineering (Civil) (Honours)

Adam is an aspiring civil engineer who hopes to work for a South Australian engineering firm or government department in roles that will challenge his intellect and provide him with exciting and innovative opportunities. In particular, he is keen to be involved with major infrastructure projects.

Completing his SACE at Southern Vales Christian College in 2017, Adam won academic excellence awards in mathematical methods, physics and chemistry, and earned a Dux award. At university, he received a Chancellor's Letter of Commendation in both 2018 and 2019.

From a young age, Adam has demonstrated leadership and collaboration skills. He was awarded the Australian Defence Force Long Tan Youth Teamwork and Leadership Award in 2015, served as class captain at school, is involved with sporting clubs, and has notched up more than two years' managerial experience in the workforce. Last year, he completed a 20-week industry placement with the City of Holdfast Bay, where his hard work, enthusiasm and skills were rewarded with continued employment as an undergraduate civil engineer.

Adam's Honours thesis will analyse the use of recycled plastic aggregates in eco-friendly concretes. He hopes to apply his leadership and collaborative traits to a career in civil engineering.

Phillippa Tsirgiotis

Bachelor of Engineering (Mechanical) (Honours)
Master of Engineering (Biomedical)

Phillippa is a fifth-year student with a fascination for rehabilitation engineering and medical device design. Her combined studies in Mechanical and Biomedical Engineering have given her a unique perspective on the human body – as both an organism and a complex mechanical system.

She is a highly decorated student with a history of significant achievement. In 2018, a robot developed by Phillipa and her team earned fifth place in the national WEIR Minerals/Warman Design and Build Competition. Before that, she won a Summer Research Award. She has received a Chancellor's Letter of Commendation each year of her studies so far. In 2020, she was awarded the highest commendation in the Biomedical Engineering cohort for her presentation on work integrated learning.

During an internship with Global Movement Pty Ltd, Phillipa prototyped a novel device for shoulder rehabilitation. She has been invited to continue this partnership for her Masters project, and this will enable her to further develop and test the device. She plans to trial it with patients suffering from shoulder pathologies, and study users' muscle activity during rehabilitation.

Phillippa has been a student ambassador for both Flinders University and Engineers Australia and she teaches engineering design to first-year Flinders students. She aims to become a rehabilitation engineer, developing and testing assistive technologies and prostheses.

Playford Trust Honours Scholarships – University of Adelaide

Alec Mc Callum

Bachelor of Science (Honours)

Alec was born on a farm in the Upper Mid North and grew up in the Adelaide Hills. He has always loved agriculture and the environment, and fostered his passion through an undergraduate degree in Agricultural Science. His interest in the agricultural research industry developed while undertaking work experience in the Agronomy Group at the South Australian Research and Development Institute.

Alec has received a number of accolades, including a Faculty of Science Outstanding Academic Achievement Award in all three years of his study, the Daniel Livingston Prize and the TGH Buring Prize. He has also won a Commonwealth Scholarship, a Lois Harris Agricultural Bureau Scholarship and a New Colombo Plan grant. The grant enabled him to travel to Fiji on a Project Everest Venture to work with local farmers and help improve their farms.

In his Honours project, Alec is looking at ways to improve cereal biomass accumulation in sub-optimal temperatures through agronomy. He will use a combination of crop simulations, controlled environment experiments and field trials. Long-term, he plans to continue working in agricultural research, and his goal is to be involved in projects that directly benefit South Australian farmers.

Alison Roennfeldt

Bachelor of Science (Honours)
(Molecular and Biomedical Science)

Alison's love of biochemistry developed during laboratory placements she completed at the University of Adelaide and SAHMRI while studying for a Bachelor of Science.

She moved from the Barossa Valley to study and maintained a strong academic record throughout her undergraduate studies – achieving Faculty of Science Outstanding Academic Awards each year and earning the position of top student in Biochemistry and Genetics. A biotechnology study tour to South Korea was a highlight of her undergraduate degree and gave her an insight into opportunities available in the industry, as well as an opportunity to learn about South Korean culture.

Her appreciation of different cultures has been further developed through her involvement with the university's International Student Support Program, and particularly as a volunteer senior peer mentor. This has involved organising orientation activities for new international students, leading weekly morning teas and participating in language and cultural engagement nights. In 2020, she earned a Vice Chancellor's Certificate of Recognition for outstanding volunteer service.

Alison's Honours project is focused on developing a cell-based reporter system to determine regulators of a protein called FIH. FIH plays a key role in controlling cell metabolism, and so understanding the regulators of FIH activity has potential applications in the treatment of metabolic disease. She hopes to do a PhD and continue this line of research.

Thomas Roocke

Master of Philosophy (Experimental Physics)

Thomas enjoys the development and commercialisation of technologies that use cutting edge physics. While working towards his Bachelor of Science (Advanced) (Experimental Physics), he completed an internship within Adelaide University's Optics Laboratory, and was part of a group that developed a tabletop model of the LIGO (Laser Interferometer Gravitational-wave Observatory) gravitational wave detector for use in outreach and teaching events. He was then invited to work as a research assistant with the group, helping to develop a novel optical wavefront sensor for use in gravitational wave detectors, as well as the wider industry.

In 2019, Thomas studied at Uppsala University in Sweden. He gained further research experience interning in the university's high energy particle accelerator, FREIA. Alongside his research activity, Thomas has maintained excellent academic results, receiving the Executive Dean of Science's Academic Award in every year of his undergraduate study.

His enthusiasm for physics has led him to pursue a Master of Philosophy in experimental physics. He will continue the development of a high speed, low-cost optical wavefront sensor – a device for characterising the state and shape of a laser beam. This type of device will find application in fields ranging from scientific measurement and satellite communication, to ophthalmology – where existing sensors are often prohibitively large, costly and slow. Thomas wants to continue using the interface of physics and engineering to solve complex, practical problems through a PhD program and a career in applied physics.

Nathan Van der Hoek

Bachelor of Engineering (Honours) (Mechatronic)
Bachelor of Mathematical and Computer Sciences

During his time at university, Nathan has developed a passion for engineering design and computer science – and has applied what he's learned to several self-driven programming and electronics projects conducted at home. He hopes to continue to develop his skills in the defence, space or automation industries.

Nathan recently completed an internship with Aldom Transport Engineering, during which he developed smart, reconfigurable 3D CAD models to speed the company's design and drawing workflow.

He is now doing an internship at Sage Automation and will complete his Honours project in co-operation with them. His aim is to develop simulated models of wired end-burning solid rocket boosters to achieve low cost, rapid access to space for small vehicles. The hope is to determine whether such a motor will be able to increase the payload to orbit or reduce vehicle size compared to current rocket booster technologies. Nathan is looking forward to spending more time at Sage and further developing his project management and engineering skills in a large, established company.

In 2020, Nathan joined the Adelaide Mechanical Engineering Student Society as events coordinator, and organised social and professional events for engineering students. This became a challenging task with COVID-19 restrictions in place, but new, novel events continued through social media.

He enjoys playing tennis and the piano and has been doing both for more than 10 years. He teaches piano privately and has tutored high school students – enjoying watching them progress and learn new things.

Adelaide Hills Council / Playford Trust Scholarship

Douglas Rhodes

Bachelor of Science (Honours) (Environmental Science)
Flinders University

Douglas grew up in Lobethal, where his passion for the world around him inspired his interest in environmental science. He received academic achievement awards for his final two years at Cornerstone College, where he was respected as an independent learner with an impressive work ethic, leadership skills and an ability to quickly grasp new topics.

After completing his degree, Douglas aspires to work in the Mount Lofty Ranges and the Adelaide Hills, assisting with the recovery and improvement of this "ecological hotspot". He wants to work to improve the quality of the parks and wildlife so the community can enjoy its natural beauty for generations, just as he has.

He hopes to achieve this by working on programs to promote recovery of native populations and biodiversity within the state, while furthering his knowledge and understanding of native South Australian flora and fauna.

Aurecon / Playford Trust Electrical Engineering Scholarship

Angela Vanderklugt

Bachelor of Engineering (Electrical and Electronic) (Honours)
University of Adelaide

Angela is completing her Honours project in electrical and electronic engineering, which focuses on multi-statics in passive radar within the passive radar team at DST Group. This work heavily involves digital signal processing and software development skills in a key technology of interest to defence.

She recently worked as a summer vacation student with Santos, assisting in a wireless vibration sensor trial for blowdown optimisation in the Cooper Basin. She also investigated Cathodic Protection monitoring and Equipment Condition monitoring across the Cooper Basin. Previously she was a vacation student with the DST Group's maritime division, where she developed a software-defined radio frequency transmitter to command sonobuoy underwater acoustic sensors. She found both these experiences to be extremely rewarding and gained valuable technical knowledge and management skills.

Angela says she is passionate about programming, autonomous systems and project management and wishes to pursue a career where these skills can be applied to solve real-world problems. She is a member of the Adelaide University Engineering Society and in 2020 held an executive position with the Electrical and Electronic Engineering Society of Adelaide University committee.

AusIMM / Playford Trust Scholarships

Reuben Dowie

Bachelor of Engineering (Chemical) (Honours)
Bachelor of Finance
University of Adelaide

Reuben has studied in Vietnam and contributed to a humanitarian agriculture start-up in Timor-Leste – both rich experiences that he says helped shape his long-term goal of improving lives around the world through process engineering and innovation.

He is currently undertaking his Honours project in chemical engineering, exploring the technical and economic feasibility of intermittent copper electrowinning that leverages cost-effective renewable energy in the Australian grid. Over the years, he also has applied his skills to a summer research project in the recovery of heavy metals from treated pine posts, and internships in both natural gas power generation and in-situ recovery uranium. He hopes to have a meaningful career in the minerals industry where he can apply technical expertise and lead others towards new value.

Reuben is a regular and enthusiastic teaching assistant at the University of Adelaide, helping younger students to solve technical problems. He also is committed to student engagement. He has served as a student representative and treasurer with the Chemical Engineering Society and as chemical engineering liaison for the AusIMM Student Chapter.

Josiah Park

Bachelor of Science (Honours) (Geology)
University of Adelaide

Josiah is covering a lot of ground in his quest to experience and absorb as much geological knowledge as he can.

In 2019, he visited the Middle East to study ophiolite geology in Oman, as well as making trips around Kangaroo Island and Naracoorte for palaeontology and the Flinders Ranges for field mapping and interpretation. Last summer he was in the Flinders again as a vacation student at the Beverley Mine, working in a team to map structures and geology undercover. More recently he started work on his Honours thesis research, sampling from Carrapateena, north of Port Augusta, and developing some deposit-specific insights on mineral textures and the related geochemistry of host rock.

In 2020, Josiah served as treasurer of the Adelaide University Geology Society, developing new systems, creating discussion between society and sponsors, and directly running large events for the club. He also received an Academic Achievement Award from AusIMM.

His aspirations for the future revolve around meeting those who can share knowledge and provide experience for a better understanding of Earth Sciences.

Zarin Tasnem

Bachelor of Engineering (Chemical) (Honours)
University of Adelaide

Zarin chose chemical engineering because of its applicability to a wide range of industries and has since developed a particularly strong interest in the mining industry. She recently completed vacation work at the OZ Minerals Carrapateena site, working on a FIFO roster. This gave her the opportunity to learn about concentrator operations and many aspects of metallurgy. The experience, she says, proved an invaluable adjunct to the theory learnt at university.

During her final year of studies, she is seeking to undertake more practical work experience to continue developing strong, transferable skills. After graduating she hopes to embark on a career in the minerals processing industry and contribute to South Australia's mineral industry in the future.

Zarin is constantly developing her communication, leadership and teamwork skills through volunteering and club activities at university, including as an executive committee member of the Chemical Engineering and Materials Society. She also is a strong advocate for women to enter male-dominated industries and is a committee member of the Adelaide chapter of Society of Women in Space Exploration.

Chartwells / St Ann's College / Playford Trust Residential Scholarships

Lachlan Hunter

Bachelor of Engineering (Civil) (Honours), Bachelor of Finance
University of Adelaide

Lachlan's twin interests are basketball and engineering and, after completing Year 12 at Mount Gambier High School, he was able to pursue both during a gap year at college in California. Returning to South Australia, he began studying at the University of Adelaide, moved into St Ann's College and was awarded the President's Sports Scholarship.

His results across the first two years of study – 10 High Distinctions and six Distinctions – qualified him for a St Ann's College Medal, and he also was awarded the Kent Stockdale Scholarship in 2020 for high academic and sporting achievement. He has taken on several roles within the St Ann's community, including wardenship, coaching sporting teams, and serving on the gym and IT committees.

Lachlan plans to major in structural engineering and hopes to one day manage construction projects with a team of engineers, using his leadership and teamwork skills. He is respected as a hardworking and dedicated student, with strong personal skills.

Kahli Lock

Bachelor of Engineering (Chemical) (Honours)
University of Adelaide

Kahli grew up on a sheep and cattle farm and travelled 35 kilometres each way to Bordertown High School, where she was named the 2020 Barker Dux and received the subject awards for Chemistry, Mathematical Methods, Physics and English.

She represented the school at athletics and netball, helped out at fundraisers, served as vice president of the Student Representative Council during Year 12, and volunteered for local organisations. For her efforts she was awarded an ADF Long Tan Award for Leadership and Teamwork.

Kahli was exposed to potential careers in STEM and their importance in solving world problems when she participated in the South Australian Space School in Adelaide, the National Space Camp in Canberra and the National Youth Science Forum in Brisbane.

Talking to scientists, engineers and like-minded students influenced her decision to study chemical engineering. She hopes to work in the renewable energy sector to assist with Australia's transition to a more sustainable future.

Codan / Playford Trust Honours Scholarship

Matthew Rehbein

Bachelor of Mathematical Sciences (Honours)
University of Adelaide

Matthew's interest in new technologies and solving complex problems drew him to maths, and his dedication to his studies saw him awarded the 2019 EO Tuck Prize for the highest second-year grades in applied mathematics courses at the University of Adelaide.

His current Honours project is at the interface of stochastic modelling and computation, involving the development of a jurisdictional model for COVID-19. His research will incorporate vaccinated individuals and movement between segregated populations into existing models to provide data-driven decision-making.

Matthew has completed internships with the Defence Science and Technology Group and at the Australian Cyber Collaboration Centre, most recently involving implementing human-guided machine learning techniques to predict traffic on the electromagnetic spectrum. These positions only fuelled his passion for working with cutting-edge technologies with practical applications.

Alongside his studies, he enjoys playing semi-professional NBL1 basketball as well as cricket for the university. He coaches and volunteers at his sporting clubs.

Cooper Energy / Playford Trust Scholarship

Tuan Huynh Tran

PhD (Petroleum Engineering)
University of Adelaide

Tuan was working as a production engineer at Santos, optimising the daily production of Cooper gas wells, before committing to his PhD journey. His research project is to develop an effective fracture stimulation fluid, which can be used to extract oil and gas in South Australia sustainably and efficiently. He has also supervised two Honours research projects in the petroleum industry.

His career aspiration is to become an expert in the field of sustainable energy, including sustainable production of petroleum resources and the innovation of renewable energy.

Tuan – also known as Lucas – has won a number of scholarships and awards, including StudyAdelaide's International Student Award in Academic Excellence and Best Petroleum Honours Project in Ingenuity. He has led the university's Vietnamese Student Club since 2018, organising academic workshops and cultural and sporting events. He is respected for a dedicated work ethic and a strong drive for excellence. He is always eager to learn new things and consistently tries to improve himself every day.

Coopers Brewery / Playford Trust Honours Scholarship

Luke Wooley

Bachelor of Science (Honours) (Plant Science)
University of Adelaide

While studying nutrition and food science, Luke won a scholarship from the Food and Beverage Development Fund to complete a short course in malting and brewing. It was then that a new interest in beer, sensory analysis and product development was born.

He began work as a technical officer at West End Brewery in 2013, then four years later became a brewing production team leader. This year he has returned to university to complete an Honours project, aiming to isolate and identify a wild yeast strain to ferment Agave fructans for the development of a unique Australian Agave spirit.

Luke has successfully led many projects, implementing countermeasures to improve quality, efficiency and safety for the site while developing leadership, project management, processing excellence and problem-solving skills. Highlights include managing the automation and leading the optimisation of the yeast propagation process to improve brewing quality; and optimising the paramix system used for producing ready-to-drink beverages and ciders, resulting in improved quality and cost savings of more than \$80,000 a year.

GSA / Playford Trust Honours Scholarship

Thomas Burke

Bachelor of Science (Honours) (Geology)
University of Adelaide

Thomas was an infantry soldier in the Australian Army for seven years, including commanding roles overseas, before changing tack and pursuing his interest in geology. He completed an undergraduate degree in 2020 and is now undertaking Honours, focusing on a new dating methodology for pallasite meteorites. He also is actively involved with the Adelaide University Geological Society and served as President during 2020.

Thomas received Outstanding Academic Achievement awards in 2018 and 2020, an AusIMM Academic Achievement Award in 2018, and the Brian Daily Memorial Prize for Geological Mapping in 2019. In 2020, he jointly presented a keynote presentation for the Australian Earth Science Convention session 'Scientific results of the International Ocean Drilling Program: A decade of success'.

Thomas has a passion for the space industry and hopes to remain in South Australia, building a career in planetary geology. He is particularly excited by the opportunities that the Australian Space Agency could bring over the coming years.

Nyrstar / Playford Trust Scholarships

Chetan Gautam

Bachelor of Engineering (Electrical and Electronic) (Honours)
University of South Australia

Chetan moved to Australia from his native Nepal in 2008 at the age of 18 and initially studied IT in Victoria. However, he had a strong interest in the potential of renewable energy, underpinned by childhood memories of power outages that could last for 18 hours a day. It bothered him that this was the case in a country with such potential for hydroelectricity – and this motivated him to study electrical and electronic engineering.

He maintained strong grades despite juggling full-time study with close to full-time work and was particularly inspired by the opportunity to help manage a project with Engineers Without Borders during a course looking at sustainable engineering practice.

After completing his studies in 2022, Chetan plans to seek employment in the field of energy in either a government department or a private company. He also hopes to complete a PhD in renewable energy and find suitable and favorable solutions for world to shift from traditional energy sources to renewable energy.

Nelson Hayes

Bachelor of Engineering (Electrical and Electronic) (Honours)
University of Adelaide

Nelson grew up in the Riverland and after graduating from Glossop High school worked for a year in the Almondco Australia factory to fund the next step in his education. When the time came, a passion for technology saw him choose electrical engineering and electronics.

In Adelaide, Nelson moved into St Ann's college, where he won a Collegians Association Award, secured a position as a residential tutor in 2020, and finally took on the position of senior tutor this year. Around college he is respected as a deep, reflective thinker who often brings fresh perspectives and understands the needs and aspirations of other students.

He remains passionate about regional and rural Australia and believes the health of these communities is crucial to the health of the state and national economies. He aims to help support as many rural students as possible through his work at St Ann's.

Josephine Matthias

Bachelor of Engineering (Chemical) (Honours)
University of Adelaide

Josephine loves nothing more than working alongside other engineers to brainstorm ways to make industries more sustainable while still providing high-quality products. In 2020, she was a part of Project YOU, a program that allowed her to network with other professionals. She also was a part of the Dean's Engineering Merit Program.

In 2019, aged 16, Josephine became the youngest ever recipient of a Governor's Commendation Award for excellence in Year 12 SACE subjects. She also received a Tea Tree Gully Youth Award for helping her neighbourhood campaign against bus transport cuts, which would have affected a nearby aged-care facility.

Among Josephine's many interests are serving as a youth leader in her church community, volunteering for the Engineers Without Borders club at the university, and helping to teach school students about the importance of sustainable practices. She also is involved with community basketball and volleyball teams.

Elsie Potezny

Bachelor of Engineering (Honours) (Chemical)
University of Adelaide

Elsie is majoring in renewable energy and wants to work at the forefront of this growing field, helping to develop new energy sources.

In the next couple of years, she is hoping to be part of an overseas exchange or excursion, so she can expand her knowledge of what is occurring globally. She is very keen to work with an organisation like Engineers Without Borders and help implement renewable energy projects in Third World countries.

Elsie was one of a group of students offered paid work placements at the Nyrstar's Port Pirie Smelter over the summer holidays. Under the supervision of senior staff, they tackled technical projects aimed at solving real problems and had the chance to apply their university knowledge in an industrial setting. Elsie says that by getting a first-hand insight into the life of a metallurgist, she learned important attributes necessary for performing daily tasks, including problem solving critical thinking, communication and professional conduct.

She enjoys being part of a team and working with a diverse range of people and says this is one of the many reasons engineering stood out for her as a career. She has played team sports all her life, and now plays football for her local club.

OZ Minerals / Playford Trust Minerals Industry Honours Scholarships

Emily Lewis

Bachelor of Science (Geology & Geophysics) (Honours)
University of Adelaide

Emily is completing her Honours in Geophysics, and her project involves interpreting electrical, magnetic and seismic data to identify prospective mineral regions in the Curnamona Province, in the far north-east of South Australia. She would love to work as an exploration geologist and find the next big mine in South Australia – and hopes her Honours project will yield exciting results and contribute to the development of a major project.

One of her long-term dreams is to be able to see a site develop from greenfield into an operational, world-class mine. A personal highlight of her journey so far was an international study tour to Oman, in 2019, organised by the University of Adelaide. She was one of a group of specially selected students given the opportunity to develop core geological understandings, as well as experience the wonders of the natural world.

Emily has been recognised for her academic merit and received an AusIMM Award for Academic Achievement in 2019. She has always been involved in sports, has played hockey at club level and represented South Australia in a number of junior female teams. In 2016, she was elected co-captain of the South Australian girls under-18s hockey team.

SA Power Networks / Playford Trust Scholarship

Ishika Ghosh

Bachelor of Engineering (Honours) (Electrical and Electronic)
University of Adelaide

Ishika attended Glenunga International High School where she developed strong interests in mathematical and science subjects. She is especially interested in renewable energy and says her ideal career would revolve around power and sustainability.

She is in the final year of her electrical and electronic engineering program at the University of Adelaide, and also works as an undergraduate engineer in the Connections Planning team at SA Power Networks (SAPN). She will do her Honours project in partnership with SAPN.

That work will involve investigating voltage control modes and strategies for large, embedded generators connected to the electricity distribution network. The goal is to analyse the voltage modes and strategies currently being implemented by various Distribution Network Service Providers and find the best method for South Australia's network.

As a first-year student, Ishika joined the Electrical and Electronic Engineering Society of Adelaide University and has been an active committee member. In her third year, she was elected Vice President. She has also consistently represented her fellow students in the School of Electrical and Electronic Engineering, discussing students' views and feedback with professors and course coordinators.

Georgia Kappos

Bachelor of Engineering (Electrical and Electronic) (Honours) (Renewable Energy), Bachelor of Computer Sciences
University of Adelaide

Georgia is excited about the possibilities of emerging renewable energy technology and feels lucky to live in a state where renewable energy and its widespread distribution is a reality.

She has a deep interest in combining artificial intelligence/machine learning, energy solutions and policy, and plans to complete her Honours project with these three topics in mind. In particular, she is looking at ways machine learning can optimise and improve the generation and distribution of power.

Outside of engineering, Georgia's interests include sustainability and positive culture development. Last summer, as an intern, she worked with social enterprise company Project Everest Ventures on a domestic sustainable fuel project in Sigatoka, Fiji. The project aims to educate locals about sustainable fuels and boost economic growth in developing countries. At the same time, it provides participating students with opportunities for personal growth and leadership development. Georgia earned a 'Build Leaders' award for her work.

Throughout her studies she has been active in her university community, most notably as a member of the Adelaide University Engineering Society. In 2019, she was the society's Major Events Coordinator; in 2020, she was elected President.

Seeley / Playford Trust Scholarship

Shane Harris

Professional Diploma in Building Services, Australian Institute of Refrigeration, Air Conditioning and Heating

Shane is a Project Manager in the Imagineering Department of Seeley International – Australia's largest air conditioning and ducted gas heating manufacturer and a global leader in developing cooling and heating products. The Imagineering Department is responsible for developing those products.

He is undertaking a Professional Diploma in Building Services – specifically heating, ventilation air-conditioning and refrigeration – to give himself a broader understanding of the industry and help in his current and future roles at Seeley. He began his career as a toolmaker and then completed an Associate Diploma in Mechanical Engineering as Dux of the course. He also has a Professional Certificate in Management. His key engineering achievements include extensive injection moulding tool design, manufacture and sourcing.

Shane has worked on the development of the Hardie Irrigation Pressure Compensated Irrigation Nozzle and the Hardie ZR1 Impact Sprinkler; the Seeley International Climate Wizard Vertical development (residential indirect cooler); the Seeley Climate Wizard 80 (commercial indirect cooler); and, most recently, the Seeley Extraordinaire (residential evaporative cooler), which won a Gold Good Design Award in 2020 and holds a number of patents.

Shane has been a volunteer surf lifesaver for 17 years. He has served as Vice Captain of the Glenelg Club, Inflatable Rescue Boat Captain and is currently a Beach Patrol Captain.

Thomas Foods International / Playford Trust Scholarship

Harrison Bagley

Bachelor of Engineering (Mechatronics) (Honours)
Bachelor of Mathematical and Computer Sciences
University of Adelaide

Harrison is fascinated by robotics and is excited to be working in a related area in his Honours project. He aims to gain experience in various fields and work towards a career in engineering-related research, particularly involving robotics, space science and artificial intelligence. He would love the opportunity to do a PhD.

A high-achieving student, Harrison received a SACE Board Commendation on completing school and was awarded an Executive Dean's Recognition of Academic Excellence award for academic success in both 2018 and 2019. He has just begun the Honours year of a Mechatronic Engineering degree and is looking forward to the challenges.

In the community, Harrison is involved in tutoring programs for school-aged students, is a committee member of the Adelaide Mechanical Engineering Student Society and has taken on management roles in the community-based VacsWim program. He likes to spend his time training and competing in cross-country and middle-distance track running and working as a lifeguard and swimming instructor.

Ultra Electronics / Playford Trust Scholarship

Kieran Lobban

Bachelor of Engineering (Honours) (Robotics) | Bachelor of Engineering (Honours) (Computer and Network Systems)
Flinders University

Although Kieran moved house constantly throughout school, he finished with a high ATAR after completing specialist mathematics, mathematical methods, physics and history in Year 12. He would give up his lunch breaks to help tutor fellow students in physics and maths and was always involved with the student body.

When he finished high school, Kieran's parents were living and working in rural Queensland, so his transition to university came with the challenge of having to support himself away from his family, while also getting used to a new study schedule and quite different expectations.

At the end of his first year at Flinders University, he was awarded a scholarship from Seeley International and, in his second year, he received a Chancellor's Letter of Commendation. More recently, he has been asked to tutor first-year students in maths. When he finishes his studies, Kieran would like to work in the space and defence sectors.

WSP / Playford Trust Scholarship

Andisheh Lashgari

Bachelor of Civil Engineering
University of South Australia

Andisheh is in her final year of a Bachelor of Civil Engineering program and it is her ambition to achieve High Distinctions in all her subjects. In 2019, she was in the top five per cent in her area of study, received a commendation letter from the Vice Chancellor and also became eligible to join the Golden Key International Honour Society. She has won an Alexander Symonds scholarship and the Steve Leek Memorial Prize – the latter awarded to a maximum of 10 outstanding civil engineering students.

While studying, Andisheh has worked in computer-aided design drafting and as a surveying field assistant, and this has enabled her to gain valuable experience in the field and a better understanding of preparing a site prior to commencing construction. She is particularly interested in geotechnical engineering and aims to focus her Honours project on a subject in soil mechanics.

After graduating, Andisheh would like to join a geotechnical engineering team, in which she can continue to grow and develop, taking on more responsibilities and working her way up to a project leader role. Teaching staff and peers have praised her teamwork and leadership skills, noting that she is an excellent mentor.

Nathan Lines

Bachelor of Engineering (Honours) (Civil and Environmental),
Bachelor of Finance, University of Adelaide

Nathan would like to be involved in project management and lead large engineering projects – combining the civil, environmental and financial aspects of his studies. The sustainable use of resources is important to him and he wants to make it a focus of his work.

Currently in the fourth year of his double degree, he is known for his impressive commitment to his studies, strong passion for learning and personal development, and his drive to continually improve his results. He received the Intermediate Econometrics II Excellence Award for achieving highest mark in that subject, and an engineering professor has described him as one of the best students he has taught in 34 years at the University of Adelaide.

Nathan has always demonstrated leadership, and he was Vice Captain in his final year of high school. These days he is a student ambassador for Engineers Australia, representing the organisation at tertiary institution events and coordinating Engineers Australia events at University of Adelaide. He is also a keen athlete and has won age categories in statewide Cycling SA tournaments.

Playford Trust PhD Scholarships

Jessica de la Perrelle

Physical Chemistry (Ultrafast Spectroscopy)
University of Adelaide

Jessica's curiosity about the natural world was fostered as she grew up near the ocean in Port Lincoln. After finishing high school, she moved to Adelaide to study and completed her Bachelor of Science (Advanced) at the University of Adelaide, in 2018. She majored in chemistry and experimental and theoretical physics, and was awarded the AIP Silver Bragg Medal, the Angus Hurst Prize and the G.M. Badger Prize.

Next, Jessica completed her Master of Philosophy. Leveraging her cross disciplinary skills, she chose to focus her research at the intersection of chemistry and physics, studying organic semiconductors with ultrafast laser spectroscopy. She worked primarily with two-dimensional electronic spectroscopy, a highly sensitive and complex technique.

She began her PhD early this year and is excited to be continuing her research in the field of ultrafast spectroscopy and to publish results from her Masters thesis. She has secured two academic merit scholarships from the University of Adelaide. Ultimately, she would like to pursue a career in research, either in academia or industry.

Outside of her studies, Jessica enjoys many hobbies, including field hockey, dinghy sailing and tabletop games. She captained her hockey team at the Adelaide University Hockey Club for three seasons.

Isabella Reeves

Marine Biology and Conservation Genomics
Flinders University

Isabella completed her Bachelor of Science (Honours) (Marine Biology) in 2019 with First Class Honours. She is passionate about the conservation of marine species in the face of anthropogenic pressures. Her career goal is to use DNA to investigate evolutionary-based questions, specifically the response of marine mammals to climate change.

During her studies she has developed a specialised skill set, particularly through several internships and research assistant roles which have seen her gain valuable knowledge about a number of the world's oceans. Her work has earned her several awards and scholarships, including the Max Clarke Prize in Science and Engineering, the University Medal and the NRM Rain Honours Scholarship.

Isabella's Honours research was based on the ocean's apex predator, the killer whale, and she identified its population structure in Australasian waters. Because of the lack of data and baseline information previously available, the information she gathered was extremely important for regional conservation management. Her work was showcased internationally and has already been used to help identify a globally recognised site of marine mammal importance.

Isabella's PhD project will also focus on killer whales. She aims to use next-generation sequencing technology and state-of-the-art statistics approaches to provide the first detailed insight into killer whale responses to climate change in the past, present and future. As apex predators, these mammals act as bio-indicators for marine ecosystems, and so her project will greatly assist in managing the conservation of killer whales and their environments.

Investing in South Australia's future

The Playford Memorial Trust assists high-achieving tertiary students who are contributing to South Australia's skills, knowledge and research base.

Together with partners across industry, government, the education sector and the community, it supports students undertaking undergraduate, Honours or PhD programs at the three main universities, or studying through TAFE SA.

There is a particular focus on five areas of strategic and economic importance to the State:

- Advanced manufacturing and new technologies
- Agriculture, aquaculture and food production
- Environmental sciences, including water, energy and climate change
- Health sciences and enabling technologies
- Mining and resources development.

Established in 1983 in honour of Sir Thomas Playford, SA's longest-serving Premier, the Trust has supported more than 600 students in the past decade alone.

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