Liam Blake

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Highly self-motivated applied mathematics student driven by a desire to make a positive difference to the lives of others whilst also developing a rounded toolkit of analytical skills. Seeking to combine a strong background in mathematical modelling and problem solving with industry experience to push new frontiers in mathematical research.

Education

Bachelor of Mathematical Sciences (Advanced)

The University of Adelaide

📅 February 2018 – July 2021

- **Major:** Applied Mathematics & Statistics
- **GPA:** 7.0/7.0   **WAM:** 95.08

Industry Experience

Data Science & Software Intern

Adelaide MRI

📅 March 2021 – Present

- Develop web applications for medical report writing, collaborating with doctors and other team members to produce efficient solutions and features.
- Design and implement solutions within the Python backend to a range of problems, including: designing RESTful APIs with Flask, queries and database models in SQLAlchemy, and developing, tuning and implementing machine learning models in scikit-learn.
- Adapted to a rapidly changing role as team requirements changed.
- Perform large-scale refactors of the codebase, improving maintainability and test coverage by NUM%.

Vacation Research Scholar

Australian Mathematical Sciences Institute / The University of Adelaide

📅 December 2020 – February 2021

- **Project Title:** Improving Clustering Techniques for Identifying Lagrangian Coherent Structures
- Collaborated with my academic supervisor to create and achieve my own independent research goals.
- Obtained and manipulated satellite ocean data and applied findings to simulated and real data in MATLAB.
- Synthesised multiple academic sources to combine theory and real data to produce and interpret results.
- Presented results to peers and academics nationwide at *AMSIConnect* conference.

Academic Awards

🏆 **The Executive Dean's Recognition of Academic Excellence – 2018, 2019, 2020**
High achievement across subjects in the Faculty of Engineering, Computer and Mathematical Sciences.

🏆 **Bill Henderson Prize – 2018**
Highest achievement in first year applied mathematics courses.

🏆 **Adelaide University Principals' Scholarship – 2018**
Nominated by high school principal for academic achievement and contribution to school community.

Technical Skills

- Python
- C/C++
- MATLAB
- R, RMarkdown
- Julia
- LaTeX
- Data science and statistical modelling
- Git & version control

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Undergraduate Engineer
Saab Australia

📅 December 2019 – February 2020

- Designed and developed a graphical concept demonstrator in Python to communicate application of a statistical estimator to a broader audience of Saab employees.
- Collaborated with Modelling & Analysis team and became actively involved in daily stand-ups and weekly team meetings, implementing the Agile framework.
- Created an inclusive and productive environment with other interns, taking advantage of our diverse backgrounds to support each other.
- Delivered a successful and technical presentation to a diverse audience, explaining how project fitted into broader team goals.

Other Experience

Vice President
Adelaide University Mathematics Society

📅 2020 – Present

- Lead and collaborate with a committee of 16 students working to organise club events of social, academic and industry focus.
- Encourage, lead and take part in committee meetings where ideas are discussed and all opinions considered.
- Volunteer enthusiastically to play key roles in the organisation and execution of events, applying practical problem-solving and people management skills.
- Adapted to the unprecedented COVID-19 situation, leading discussions and implementations of remote events best suited to the society's members.

Mathematics Tutor
Privately Empoyed

📅 2018 – Present

- Encourage an enthusiasm for mathematics in students, while also developing their own ability and strive for academic success.
- Develop trust by both respecting the student's ability and acknowledging their mistakes without judgement.
- Balance own schedule to be as flexible as possible in arranging sessions best suited to the student and their family.

Extra-Curriculars

- Member of Women in STEM Society at Adelaide University; regularly engaging in events including talks on diversity in STEM.
- Volunteer at the School of Mathematical Sciences stall at Ingenuity 2019; enthusiastically promoted the mathematics career pathway to school students by drawing upon own experiences.
- Black belt in Taekwondo, recognised by International Taekwondo Federation.
- City to Bay run in 2019.
- Rock-up cricketer at Adelaide University Cricket Club.

Hobbies & Interests

- Cricket, with a passion for analysing the game.
- Self-taught bass player.
- Running and exercise.
- Reading (classics, science fiction, fantasy).