Liam Blake

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Highly self-motivated applied mathematician driven by a desire to make a meaningful 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

Master of Philosophy (Applied Mathematics)

The University of Adelaide

January 2022 – January 2024

- **Project Title:** Employing stochastic sensitivity to quantify trajectory uncertainty in Lagrangian data assimilation.

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
- **Notable Awards:**
  - The Sir Ronald Fisher Memorial Scholarship for highest achievement in third year statistics courses.
  - The David Murray Prize in Mathematics for high achievement across third year mathematics courses.

Technical Skills

| Python | Julia | C/C++ | MATLAB | R, RMarkdown | LaTeX | Git & version control | Command line & shell |

Industry Experience

Data Science & Software Intern

Adelaide MRI

March 2021 – December 2021

- Develop web applications for medical report writing, collaborating with doctors and other team members to produce efficient solutions and features.
- Design and implement Python solutions using APIs with Flask, queries and database models in SQLAlchemy, and machine learning models in scikit-learn.
- Adapted to a rapidly changing role as team requirements changed.

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.
- Delivered a successful and technical presentation to a diverse audience, explaining how project fitted into broader team goals.

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Other Experience

Tutor and Marker

The University of Adelaide

March 2022 – Present

- Provide drop-in tutoring for first year students across several mathematics subjects.
- Mark assignments across first and second year mathematics subjects, providing useful feedback to help students improve.

Vice President

Adelaide University Mathematics Society

January 2020 – January 2022

- 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.
- General committee member in 2019.

Mathematics Tutor

Privately Employed

March 2018 – November 2021

- 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.

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.