

Isaac Beh

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isaacbeh.net

Education

2021–2024 **Bachelor of Math. & Bachelor of Science at The University of Queensland**
Majors in statistics and physics. Cumulative GPA of 7.0/7 as of semester 2, 2023.
Expected to graduate at the end of 2024.

Experience

- Feb. 2022– Present **Tutor & Lab Supervisor within the UQ School of Maths & Physics**
- Explained complex statistics, mathematics and programming concepts to classes of over 25 undergraduate students.
 - I have taught:
 - STAT2003 in semester 1 of 2024
 - MATH1071 in semester 1 of 2024
 - STAT2004 in semester 2 of 2023
 - MATH2504 in semester 2 of 2023
 - MATH1061, MATH7861, STAT2201, STAT1201 and PHYS1171 in previous semesters
 - Average tutor rating of 4.85/5 from anonymous end-of-semester school-wide survey.
 - “Isaac always was very open to taking on any questions. He was never too busy for anyone, and always approached answering questions from a non-judgmental place of passion for the subject. He is an excellent tutor.” — Anonymous survey response
- Nov. 2023– Feb. 2024 **Intern at Oracle’s Software Assurance Team** — *LLMs, Python, Go, Java*
- Explored how LLMs and AI techniques can be used to write static analysis tools.
 - Produced and presented a working demo written, with patent in the works.
- Jun. 2023– Jul. 2023 **Laser Beam Shaping at the Queensland Brain Institute** — *Matlab, T_EX*
- Integrated and calibrated a new SLM (think adjustable mirror) into the existing SPIM microscope. This is used to focus lasers in 3D to stimulate specific zebra fish neurons.
 - Modified code to reduce calibration time by 50% whilst maintaining similar precision.
 - Created a user-friendly application with GUI to control the SLM and provided inter-connections to other programs. This allows other researchers to use the SLM-focused laser without specific training or knowledge of SLMs.
- 2021–2023 **Tutor at Hubbard’s School**
- Tutored grade 11 & 12 maths and physics, explaining advanced concepts.

Extra-Curricular

- 2022– Present **UQ Mathematics Student Society President & Secretary**
- Have contributed to and fostered a lively maths community within UQ.
 - Coordinated a team of five to organise events with over 70 people attending.
- 2023– Present **UQCSbot Maintainer & Contributor** — *Python, MySQLAlchemy, Git*
- Devised and implemented various highly-used features of the bot, such as coding competition leader-boards, past exam paper searches and automatic haiku detection.
 - Wrote documentation, including all of [the current build guide for new contributors](#).
- 2022 **Talk: Combinatorial Game Theory & The Fuzzy Consequences**
- Presented a talk to over 50 people on the construction of the surreal numbers, their strange properties and how they relate to games.