Isaac Beh

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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

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, TEX*
- 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 interconnections to other programs. This allows other researchers to use the SLM-focused laser without specific training or knowledge of SLMs.

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. Tutored 7 distinct courses, including *Statistical Modelling & Analysis* (STAT2004) and *Programming of Simulation & Analysis* (MATH2504).
- 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

Extra-Curricular

2023– Present **UQCSbot Maintainer & Contributor** — *Python, SQL (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.
- Created and merged 31 PRs and have reviewed another 23 PRs authored by others.
- Wrote documentation, including all of the current build guide for new contributors.

2022–2024 **UQ Mathematics Student Society President & Secretary**
- Coordinated a team of five to organise events with over 70 people attending.
- Liaised with industry sponsors and fostered a lively maths community.

2022 **WiiWalk** (UQCS Hackathon) — *C#, Bash, Git*
- Developed a program within 40 hours to obtain and interpret the weight measurements of a Wii Balance Board, returning keystrokes as a method of controlling video games.
- Winner of the Best Presentation Award and of the popular vote.

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.

2021 **Betcoin** (UQCS Hackathon) — *Solidity, React, Git*
- Created a parody Ethereum-based cryptocurrency that can only be traded by betting.
- Winner of the Best Newcomers Award as a part of a team of three first-years.