QiLin Xue

http://xueqilin.me
qilin.xue@mail.utoronto.ca | 647.807.2145

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A full list of references can be provided upon request

EDUCATION

UNIVERSITY OF TORONTO
Engineering Science '24
cGPA: 3.93

LINKS

Website: xueqilin.me
Github:// QiLinXue

SKILLS

- Python
- Matlab
- Mathematica
- Verilog
- ARM Assembly

ADDITIONAL COURSEWORK

I took the following additional courses in my second year of Engineering Science.

- MAT257: Advanced analysis course discussing the topology and manifolds of $\mathbb{R}^n$.
- PHY365: Introductory course to key concepts in quantum computing and quantum information.
- APS360: Introductory course to artificial intelligence. Covers CNNs, RNNs, and NLP techniques.
- PHY364: Advanced Classical Mechanics, which discusses Lagrangian and Hamiltonian formalisms, as well as rigid body dynamics
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EXPERIENCE

UNIVERSITY OF TORONTO | Teaching Assistant
Sep 2022 – present

- Lead programming lab practicals for ESC180: the first year programming course for engineering science students.
- Lead tutorials and office hours for MAT188: the first year linear algebra course for Core-8 engineering students.

ART OF PROBLEM SOLVING | TA/Grader/Halper
May 2020 – present

- Graded homework to prepare students for math competitions
- Answered student questions during live lectures and out of class time
- Topics taught ranged from number theory and math competitions to Python and Olympiad physics.

GLOBAL AFFAIRS CANADA | Data Analyst
May 2022 – Present

- Used Python and PowerBI to analyze treaty data between Canada and other countries.
- Helped maintain and clean up the treaty database at treaty-accord.gc.ca.

MIDISHARK | Collaborator
Sept 2021 – Dec 2021

- Applied NLP techniques such as Transformers to music processing, in order to transcribe piano pieces.
- Developed and optimized pre-processing code for >100GB of data.
- Achieved a better accuracy than Google AI's 2017 model.

NATIONAL UNIVERSITY OF SINGAPORE | Research Intern
May 2021 – August 2021

- Used C++, ROOT, SRIM to model various diamond radiation detectors.
- Collaborated with professors and graduate students through weekly meetings.

PHYSOLY | Nonprofit Founder
Mar 2020 – present

- Organizes large community projects on the website `physoly.tech`
- Manages a large online community with 2000+ physics students preparing for olympiad physics
- Founded the largest student run physics competition OPhO with 600+ students from 40+ countries competing annually.

ACHIEVEMENTS

2021	6th Place	CAP University Physics Contest
2020	Special Award	PUEC Physics Research Competition
2020	2nd Place	TJ Physics Olympiad
2019	1st Place	McMaster Physics Competition (780 participants)
2019	Honor Roll (Top 4%)	Euclid Math Contest (20,000 participants)
2017	Top 50	Canadian Intermediate Math Contest (10,000 participants)