

Kevin Qu

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Education

University of Toronto—BASc, Engineering Science

Sept 2021 – May 2025

Average Grade: 93.6%, cGPA: 3.93/4.0, sGPA: 4.0/4.0, Dean's List Scholar

Courses: Data Structures & Algorithms, Deep Learning, Statistics, Digital Systems, Computer Architecture

Technical Skills

Languages: Python, C, C++, Verilog, RISC-V, JavaScript, HTML/CSS, Java, Bash, MATLAB, SQL, C#

Frameworks: ROS, scikit-learn, PyTorch, React, Node, Express, Flutter, ASP.NET, Axios, jQuery

Tools: Fusion 360, Linux, Git, slurm, SQLite, Postman, MongoDB

Professional Experience

ML Undergraduate Research Student

May 2022 – Present

BHK Lab, University Health Network

Toronto, ON

- Working with scientists & PhD students on image segmentation with Python. Supervised by Dr. Haibe-Kains
- Developed ML pipelines, streamlining ML research by up to 5x, co-authored [doi:10.5281/ZENODO.7021436](https://doi.org/10.5281/ZENODO.7021436)
- Used PyTorch to create U-Nets more accurate than expert human cancer segmentations (~80% Dice)
- Sent large computation tasks to high-performance computers through slurm with Bash scripting
- Created data standardization and trained ML models for Vector Institute AI challenge

Robotics Engineer

June 2022 - Present

University of Toronto Aerospace Team

Toronto, ON

- Robot and aircraft development in Linux using C++, Python, ROS, Gazebo, SOLIDWORKS, PX4, MAVROS
- Fabricating rover bot, aircraft and drones to compete in SAE Aero Design – Advanced
- Working on autonomous navigation with ROS Navigation, ground control and electrical integrations

ML Project Developer

Sept 2021 – May 2022

UofT Machine Intelligence Student Team (utmist.gitlab.io/projects/employeeattrition)

Toronto, ON

- Used scikit-learn's ML packages to SVM, Decision Tree and K-means Clustering models
- Created employee attrition prediction ML model based on IBM workplace data
- Built website with fully integrated model in Django that can generate inferences and won Best Technical Award
- Model predictions outperformed (93% accuracy) current research (85% accuracy) on the same data

Software Engineer Intern

Jun 2021 – Aug 2021

Idea Notion Development Inc. (ourposter.com) Markham, ON

- Developed C# console apps and Node.js scripts to call MapBox API for generating poster images
- Built webpages with HTML/CSS, JQuery, WordPress. Revolutionized OurPoster, allowing custom maps
- Automated manual image editing with Python Pillow (dealerai.com)

Honors & Awards

University of Toronto Scholar (top 0.4% @ UofT)

2022

In-course scholarship awarded to the top 300 most outstanding undergrads out of 76,000 at UofT (top 0.4%)

Schulich Leader Scholarship (\$100k) (schulichleaders.com/kevin-qu)

2021

\$100,000 award to 50 outstanding engineering students at 20 universities across all Canada

Projects

IntelliCord (devpost.com/software/intellicord) Hack the 6ix Finalist (top 8/70+)

Aug 2022

- AI Chatbot that provides mental health tips using co:here and GPT-3, made with Python and SQLite3
- Worked on Discord integration, co:here & GPT-3 API calls, SQLite management and statsmodels analysis

Abyss (devpost.com/software/abyss-ewprci) MakeUofT Best "Useless Invention" Award

Feb 2022

- Table that caves in when objects are detected. Arduino UNO with several electrical & mechanical parts

Feed it Forward (feeditforwardapp.herokuapp.com)

Jan 2022 – May 2022

- Inventory manager project according to Request for Proposal built for Feed it Forward in Praxis 2 course
- CRUD web app built with MERN stack with fully-integrated barcode scanner and mobile view, on Heroku