

ERIC XIE

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EDUCATION

University of Toronto (UofT)

BASc. Engineering Science

Toronto, ON

September 2024 – Present

- **GPA:** 3.8/4.0
- **Extracurriculars:** UofT Aerospace SAE software team - camera simulation & localization in Gazebo; UofT Formula Racing braking team - designing brake piston in Solidworks
- **Roles:** EngSci 1st Year Representative (2/278) - resolve academic challenges, improve student well-being

PROFESSIONAL EXPERIENCE

MLH Fellowship @ Facebook AI Research

Remote

Software Engineering Fellow (2% acceptance rate)

Jun 2024 - Sep 2024

- Contributed to SimulEval, an evaluation toolkit for simultaneous translation; 5 Python pull requests merged
- Created a visualization feature for raw speech to text data, aiding researchers in interpreting and understanding output
- Implemented a Docker feature for remote speech to text inference, ensuring uniform environment OS and dependencies
- Developed a streaming demo feature which transcribes user's speech in real-time through OpenAI's Whisper and Pyaudio
- Proactively troubleshoot logic and dependency errors, improving GitHub workflow efficiency by 50%

PROJECTS

Viral Insight

Remote

Front End Developer

Jun 2024 - Jul 2024

- Developed an AI-powered video statistic prediction tool for YouTube videos as part of Buildspace 2024, empowering content creators with brainstorming catchy titles
- Designed the frontend UI using NextJS with backend integration; hosted on Vercel
- Successful product demo and launch with 600+ page views and 100+ upvotes on Product Hunt

Vita

Vancouver, BC

Team Leader

Feb 2023 - Aug 2023

- Spearheaded a low-cost, zero-electricity, sustainable water-filtration bottle project for BC Indigenous communities to tackle systemic clean water shortage in local lakes and rivers
- Handled design & 3D-printing & prototype testing, and team delegation to ensure smooth development and operation
- Successful demonstration @ UBC Gala & completion of the STEM Ambassador program with 500+ attendees

Nail Braille

London, ON

Chief Engineering Officer

July 2022 - Nov 2022

- Led development of a speech-to-braille learning device for visually impaired individuals to help navigating and interacting with the surrounding environment
- Utilized Arduino & CAD; interfaced Mozilla DeepSpeech; developed 3 iterative prototypes
- Shad 2022 Best Prototype Award & 2022 Youth Innovation Showcase Finalist + Public's Choice Award

VEX Robotics

West Vancouver, BC

Programmer & Designer

Sep 2021 - Jun 2024

- Developed motion control algorithms: PID, Odometry, Pure Pursuit to execute precise autonomous robotic movements
- Designed through CAD; constructed hardware prototypes and mechanisms: power-take-off (PTO), chassis, ratchet, gear ratio
- 8 tournament awards, including 2022 BC Provincial Finalist and scoring top 30% in the World Championship

FRC Robotics

West Vancouver, BC

Programmer & Electrician

Jan 2022 - Jun 2023

- Implemented odometry position tracking algorithm that significantly improved autonomous accuracy, and field-centric swerve drive kinematics that improved robot maneuverability
- Wired CAN bus and electrical components; supported other subteams to overcome obstacles to maximize performance
- 2022 Canadian Pacific Regional Winner & Excellence in Engineering Award

TEDxYouth@SunsetBeach

Vancouver, BC

TEDx Speaker

Oct 2023 - Dec 2023

- Delivered a 10-minute TED Talk titled "Take the First Step - What I Learned from Talking to 100 Strangers"
- Detailed overcoming social anxiety and communication barriers as an international student; inspired others to continuously step outside of their comfort zones

LEADERSHIP

Ten Ton Robotics

Tournament Manager

West Vancouver, BC

Oct 2021 – Jun 2024 (78 hours)

- Reserved VEX IQ elementary & middle school tournament venue; set up hardware & software; coordinated volunteers; resolved logistic & technical challenges
- Ten Ton Robotics Most Valuable Volunteer 2022 & 2023
- International Robotics Honour Society 2024 for exceptional contribution in robotics education

Ambleside Parkrun

Parkrun Director

West Vancouver, BC

Aug 2022 - Jun 2024 (44 hours)

- Setup & oversaw event-day 5km course checks to ensure safety
- Gave 5-minute speeches to welcome weekly 100+ participants; promoted fitness in the community
- District of West Vancouver Youth Recognition Award in 2023 for exceptional community involvement and service

UTG Academy

VEX IQ Robotics Instructor

Vancouver, BC

Jul 2023 – Aug 2023 (47 hours)

- Taught hardware mechanisms: bar lifts, gear ratios to educate young students about mechanical design
- Introduced software tools: Scratch, VR to help students build fundamental programming skills
- Fostered an interactive and fun play-and-learn environment for 20+ middle school VEX IQ students

UBC Geering Up

Junior Instructor

Vancouver, BC

Jul 2023 (67 hours)

- Prepared materials for summer STEM camps; delivered lessons to Gr.2-9 students; coordinated lessons and activities
- Improved leadership, communication & planning skills through education

AWARDS & CERTIFICATIONS

UofT Engineering Kompetition (UTEK) Junior Division Finalist, 4/50 teams

Hardware & design, Jan 2025

AWS AI & ML Scholarship - developed a flower classification neural network using PyTorch

Software, Nov 2024

AWS Hack The Student Life Hackathon Winner

Software, Nov 2024

American Computer Science League (ACSL) Senior Division 1st Place, Finalist

Software, May 2023

USA Computing Olympiad (USACO) Gold Division

Software, Mar 2023

International Robotics Honour Society

Robotics, Jan 2024

High School Mathematical Contest in Modelling (HiMCM) Meritorious

Mathematics, Jan 2024

Waterloo Math Competition (CIMC, Cayley, Galois, Hypatia, Euclid, Fermat)

Student Honour Roll

Mathematics, Nov 2021 - Feb 2023

WHMIS Safety Certification

Safety, Sep 2024

Bronze Cross - Lifesaving Society

Safety, June 2021

Standard First Aid with CPR C/AED - Lifesaving Society

Safety, May 2021

SKILLS & INTERESTS

Software skills: C++, Java, Python, PyTorch, HTML, CSS, JavaScript, ROS, Docker, GitHub, ReactJS, NextJS, Vercel

Hardware skills: Solidworks, Arduino, Onshape, 3D Printing, Soldering, Machining, Welding, Robotics design

Professional skills: Leadership & Management, Teamwork & Collaboration, Active learning & Curiosity, Communication & Public speaking

Languages: English (native), Mandarin (native), French (intermediate)

Hobbies:

- Student government: IB Council Chair 2022-2024, Grad Committee Member 2023-2024
- Chess: Founder & President of West Van Chess Club 2020-2024; player for 12 years
- Sports: Track and field (triple jump), ultimate frisbee, swimming