Ted Zhang

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Summary of Qualifications

- Experience in **Java**, **C++**, and **Python** through university courses, personal projects, and previous internships.
- Proficiency in **Artificial Intelligence, TensorFlow**, **Keras**, **OpenCV, Pandas**, and **Tkinter** from developing a medical diagnosis AI.
- Also proficient in **React.js, CSS/SASS,** and **JavaScript** from building a personal portfolio website.
- Skilled in **Linux**, **Unix shell scripting**, and **Docker** from containerizing AI applications.
- Good knowledge in **AutoCAD**, **SOLIDWORKS**, and **machining aluminum** from designing various drivetrain parts for Formula Electric.
- Excellent interpersonal communication skills and presentation skills proven by a **top 60** placement in DECA Regionals.
- Strong work ethic and strong analytical and problem-solving skills proven by exceptional academic performance.
- Creative and well-organized team player with a proven ability to learn new technologies quickly and work independently.

Experience

Artificial Intelligence Intern, *Advanced Micro Devices Inc. (AMD)* Jan 2022 – Apr 2022

Markham, Ontario

- Developed and trained a medical diagnosis **AI** using **TensorFlow**, **OpenCV**, and **Keras** trained on brain scans from an RSNA database of over **700,000 images** that can detect intracranial hemorrhages with **94% validation accuracy**. Utilized transfer learning using InceptionV3 as well as a custom data loader.
- Built both a CLI and GUI using **Tkinter** to display the brain scans along with their predictions in a user-friendly manner. Wrote a user guide to accompany the program.
- Containerized AMD's AI inference optimization library, ZenDNN, along with various other pretrained models using **Docker**.
- Tailored the containers for specific models with custom **bash scripts** used to run pre-set benchmarks.
- Wrote a script for, storyboarded, recorded, and edited a technical instructional video for installing and using ZenDNN in Linux.

Tractive Systems Team Member, *University of Waterloo Formula Electric* Oct 2021 – Apr 2022

Waterloo, Ontario

- Worked with team members to design in **SOLIDWORKS** and produce various parts of a drivetrain and battery pack for an electric race car. Independently designed a cell fuse resistance testing device in **SOLIDWORKS**.
- **Prototyped and machined** aluminum cooling vents underneath the battery of the car.
- Modified a PDU mount to include a waterproofed container for a relay in **SOLIDWORKS**.

Relevant Projects

Personal Website Apr 2021 – Present

www.tedzhang.ca/

- Built a multi-page personal portfolio website complete with interactive elements using **React.js**, **SASS**, and **JavaScript**.
- Optimized website for mobile responsiveness and added features like a mobile menu and dynamically resizing elements to improve user experience.

Mastermind Artificial Intelligence Dec 2020 – Feb 2021

- Designed and programmed the algorithm for an artificial intelligence that can play the game Mastermind with 3 levels of difficulty in **Java**.

Education

BASc, Mechatronics Engineering, *University of Waterloo* Sept 2021 – Sept 2026

Waterloo, Ontario

- Fall 2021 Dean's Honours List
- Relevant Courses: Algorithms and Data Structures, Digital Computation, Circuits, Linear Algebra, Calculus 1 & 2

Awards & Certifications

Computer Engineering Award, *Unionville High School* Sept 2020

PY0101EN: Python Basics for Data Science Certificate, *IBM and edX* April 2020