

ALI TAHA

☎ 647-544-5933 ✉ ali.taha@uwaterloo.ca 🌐 alitaha.ca 🌐 [linkedin.com/in/aliestaha](https://www.linkedin.com/in/aliestaha) 🌐 github.com/aliestaha

Education

University of Waterloo

Sep. 2022 – May 2027

Candidate for Bachelor of Applied Science : Computer Engineering Honours

Waterloo, ON

Technical Skills

Languages: Python, Java, C++, HTML/CSS, JavaScript, SQL, Bash

Frameworks: NumPy, Scikit-learn, TensorFlow, Keras, PyTorch, Pandas, Node, Vue

Tools: Linux, PostgreSQL, Git, Jira, Rally, Jupyter Notebooks, WSL, GNU (GCC, Make, GDB)

Experience

Watonomous

March 2024 – Present

Autonomous Software Core Member

Waterloo, Ontario

- Implemented custom **ROS2 nodes** for sensor data processing and robot control.

Ford Pro

January – April 2024

Software Engineer - Test Automation Co-Op

Oakville, Ontario

- Executed smoke and regression testing across **3 projects**, systematically reported over **80 defects** on Rally, and validated the fixes by iterative testing.
- Aided in moving tests from **Datadog** to **Scriptless mobile**, reducing operation costs and enabling hourly rather than daily testing—**24X** higher frequency.
- Automated smoke and regression testing using **Cypress.js** and **TypeScript**, reducing task completion time from 30 minutes manually to just **5 minutes** per script.

Blackberry

May – August 2023

Full-Stack Developer Co-Op

Waterloo, Ontario

- Engineered, deployed, and documented a full-stack solution at Blackberry, enabling **4000** personnel across **29** global offices to seamlessly access and leverage a tool that visualizes region and service records.
- Used **VueJs** to create a user-friendly interface, and **NodeJs** on server-side to handle backend operations.
- Utilized **PostgreSQL** for efficient data management, implemented dynamic search functionality, optimized **SQL** queries for faster data retrieval, and implemented a robust back-end API.
- Achieved a **75%** reduction in processing time by shifting to **JIRA DB**, utilizing **Chef**-managed **cron jobs**.
- Built **Python** scripts for rapid, automated email alerts on key PostgreSQL database changes. Achieved **sub-2-second** delivery of asynchronous notifications, optimizing responsiveness of internal teams.

Projects

🔗 Decision Trees: Cardiovascular Disease | *Numpy, Scikit-learn, Pandas, XGBoost, Matplotlib*

March 2024

- Developed and optimized **Decision Tree** and **Random Forest** models using Python and Scikit-learn to predict the likelihood of cardiovascular disease.
- Improved model accuracy from **0.85** to **0.94** by utilizing **XGBoost**, leveraging its gradient boosting framework
- Employed **matplotlib** for data visualization, facilitating the analysis and comparison of model performances.
- Leveraged data preprocessing techniques such as **one-hot encoding** with **pandas** and hyperparameter tuning to minimize model overfitting and maximize predictive performance.

🔗 Stock-AI: AI-Powered Stock Market Assistant | *Python, Selenium, OpenAI API, React*

February 2024

- Developing an AI-driven platform for stock market trading recommendations, integrating real-time data analysis and automated trading within a **72-hour** hackathon.
- Integrated **OpenAI's API** for dynamic stock market forecasts by analyzing current news summaries and financial reports.
- Designed and implemented a **Python** backend to fetch and process stock market data and news content, establishing a data pipeline for real-time analysis.

🔗 Digit Recognition Neural Network | *Python, NumPy, Scikit-learn, TensorFlow*

January 2024

- Created a neural network binary classification of hand-written digit (0-1) recognition using **TensorFlow** and **Keras**, with a **99.6% accuracy** (15 errors/5000 input features).
- Extended neural network to perform **multiclass classification** of digits 0-9.
- Improved accuracy to **99.98%(1 error in 5,000)**, by utilizing **ReLU** and **Softmax** activation, and increasing epochs.