

# SARIM KHAN

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## Education

### Western University

*Bachelor of Science in Computer Science*

**Expected Graduation: May 2025**

*London, Ontario*

## Relevant Coursework

- Data Structures
- Algorithms
- Linear Algebra
- Computer Architecture
- OOP
- Systems Programming
- Data Science
- Software Tools

## Experience

### Kevaras Autonomous Services

**May 2023 – August 2023**

*Software Development Intern*

*Oshawa, Ontario*

- Built and deployed front-end autonomous sidewalk inspections commercial stack at Brazilian robotics startup.
- Utilized **Google Maps API** to create interactive map with updated information regarding road conditions.
- Collaborated with **Big Data** team to improve user-experience in preparation for 2023 seed funding round and further expansion into North America.
- Imported and categorized **11,000+** ROS Sidewalk scans in the city of Oshawa using **Quasar** and **Vue.js**.
- Created Confluence pages for code documentation, improving efficiency and eliminating **10+ hours** of work/month for project managers.

### Western Algorithmic Trading

**November 2023 – Present**

*Quantitative Developer*

*London, Ontario*

- Developing mean reverting algorithms that identify and record **Closed-End Fund Arbitrage** opportunities using **Python**.
- Researched premiums and discounts using NAV and market price on Sprott Uranium Trust positions.
- Utilized **React** and **MongoDB** for building interactive app to display analysis on investment strategies.

### Western AI

**November 2022 – February 2023**

*ML Software Developer*

*London, Ontario*

- Collaborated and built **Convolutional Neural Network** with development team to analyze thyroid levels and detect tumours in large collections of MRI brain scans.
- Performed data partitioning and analysis using **Jupyter Notebook** through **Google Colab**.
- Co-authored research paper for presentation at CUCAI 2022 conference.

## Projects

### RescueLink | *Python, NodeJS, Fastify, Google Maps, TailwindCSS*

- Developed an AI 911 Dispatcher Assistant by using **voice-to-text** to collect caller information.
- Implemented fine-tuning using **GPT-4** prompt engineering and **AssemblyAI** to create effective transcription and sort important call facts.
- Harnessed **Google Maps API** to pinpoint user location and alert nearby emergency responders.
- Built automated **SMS** system using **Infobip** to develop emergency alert system for duration of call.
- Decreased average connection to local first responders to within **60 seconds**.

### Team Tumour | *Python, Keras, Tensorflow, Pandas, SciKit, Matplotlib*

- Utilizing **Deep Learning** principles with student team for tumor detection in brain scans.
- Learned and utilized ML libraries such as **TensorFlow** and **Keras** to effectively train models.
- Produced **91% accuracy algorithm** across all scans, implementing and improving **5+** existing Kaggle datasets.

## Technical Skills

**Languages:** Python, Java, JavaScript, C, Typescript, R, HTML/CSS

**Developer Tools:** VS Code, Github, Eclipse, Google Colab, Postman, Ngrok, Jupyter Notebook

**Technologies/Frameworks:** MongoDB, Postman, NodeJS, VueJS, ReactJS, TailwindCSS, Git

**Libraries:** Matplotlib, NumPy, SciKit, Pandas, Keras, Tensorflow

**Operating Systems:** Linux, Windows