

Joshua Philip

Employment

Research Assistant, Intern

May-December 2023

Sheridan College, Centre for Applied AI

Lifecycle Management of Phones and Mobile Devices Project, Industry Partner: SOTI

- Improved privacy of Android app by researching, and implementing a centralized federated learning system using Java, Kotlin (edge devices), and Python (server-side)
- Rewrote Python preprocessing code in Kotlin and Java for on-device execution
- Trained a TensorFlow Lite model on the CIC dataset to detect malicious connections, utilizing VirusTotal API for connection classification to enhance network security
- Incorporated on-device training with TensorFlow Lite, enhancing privacy and allowing for model customization

Machine Learning Data Analyst, Intern

May-December 2022

Sheridan College, Centre for Applied AI

Smart Towns: Optimizing Urban Planning Using IoT, Industry Partner: Naryant & Town of Oakville

- Led the design of a 400-person survey that utilized Python tools for data cleaning and analysis
- Utilized Pandas, NumPy, and GeoPandas to analyze large datasets, geocode bus stop names, map data points, and visualize origin-destination locations with geospatial coordinates
- Ensured code quality through QA testing, evaluating Python code against specified requirements

Education

Honours Bachelor of Computer Science (Mobile Computing) - Graduated: December 2023

Sheridan Institute of Technology & Advanced Learning - Oakville, ON

- Cumulative GPA: 3.51 / 4.00

Certifications

Harvard edX Verified Certificate for CS50's Introduction to Artificial Intelligence with Python:

- Gained exposure to graph search algorithms, classification, optimization, reinforcement learning, and other AI/ML topics through hands-on projects

Microsoft Technology Associate: Software Development Fundamentals (MTA):

- Proficient in computer storage, decision structures, error handling, and object-oriented principles like inheritance and polymorphism, along with ASP.NET, web services integration, and C#

Software Projects

Real-Estate Management App - SwiftUI, Firebase

- Integrated machine learning algorithms to ensure image compliance
- Developed real-time chat functionality using Firebase for quick communication between tenants and landlords with features like text-to-speech
- Implemented a property search system to allow Tenants to filter their searches or view nearby properties using a map
- Created a user management system that utilizes Firebase for storage and authentication and a forgot password page for the user to request a password reset

Traffic Sign Recognition using TensorFlow - Python, TensorFlow, OpenCV, scikit-learn

- Designed and built a neural network to classify road signs using the German Traffic Sign Recognition Benchmark (GTSRB) dataset
- Gained proficiency in using TensorFlow for deep learning applications
- Improved image preprocessing skills using OpenCV
- Enhanced understanding of convolutional neural networks and their application in computer vision tasks

Skills

Proficient: SwiftUI, Kotlin, Java, Python, Git, SQL **Familiar:** C++, C#, MatLab, Javascript, HTML/CSS