Prithvi Seran

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EDUCATION

University of Toronto Toronto, Ontario
BSc. Honours Computer Science (GPA: 3.78) *Sept. 2023 – Sept. 2028*

EXPERIENCE

Mobility Innovations Lead Aug. 2024 – Present
AUToronto *Toronto, Ontario*
- Led a team of engineering undergraduates in the Mobility Innovations competition for the SAE AutoDrive challenge, hosted by GM.
- Developed novel solutions to prevent autonomous vehicles from being bullied on public roads.

Data Processing Member Jan. 2024 – Present
University of Toronto Aerospace Team *Toronto, Ontario*
- Leveraged transfer learning to implement diffusion models and transformer models to remove complex noise (any distortions in the image such as image noise, dead pixels, stripes, etc) from hyper spectral images using TensorFlow and PyTorch.
- Co-authored a research paper titled "Beyond the Visible: Jointly Attending to Spectral and Spatial Dimensions with HSI-Diffusion for the FINCH Spacecraft".

Firmware Developer Jan. 2024 – Present
University of Toronto Aerospace Team *Toronto, Ontario*
- Developed drivers for the FINCH satellites Emergency Power System, which consisted of a BMS, load switches, buck converter and an MPPT board.
- Analyzed circuit schematics and CPU datasheets to manipulate registers and establish communication between the OBC and the EPS using I2C protocols.

PROJECTS

AI Digital Marketing | *Django, PostgreSQL, GCP, Llama 3* Jun. 2024 – present
- Developed a Django-based application to automate and optimize email marketing campaigns.
- Implemented Selenium to find relevant businesses and utilized Scrapy to extract content from their websites.
- Integrated the LLM Llama 3 to generate personalized email templates tailored to individual businesses.
- Leveraged Google Cloud Platform for user authentication and enabled Gmail-based email dispatch.
- Engineered a PostgreSQL database solution to securely store and manage users' email campaign data, ensuring fast data retrieval and scalability.

TAAMS Item Collection Management | *Android, Java, Firebase, SCRUM* Jul. 2024 – Aug. 2024
- Led a development team in building an Android app in Java for the Toronto Asian Art Museum.
- Served as SCRUM master, facilitating daily stand-ups and removing sprint impediments to ensure smooth progress
- Integrated Firebase Authentication for secure admin login and utilized Realtime Database for efficient museum item management.

DrawNote AI | *C#, Azure, PyTorch, Swift* May 2024 – Jul. 2024
- Developed DrawNote AI, an iOS app designed to capture whiteboard and blackboard drawings, converting it into OneNote pages to assist students with note-taking.
- Employed Azure Storage Blobs and Azure Functions to execute PyTorch DNN models for drawing extraction.
- Utilized C# and the InkML markup tool to make POST requests to OneNote for content transfer.
- Designed a user-friendly interface with Swift, incorporating MSAL authentication for secure Outlook email login.

Freelance Software Developer | *Python, GCP, Terraform, Swift* Nov. 2023 – Jan. 2024
- Developed a Python module to seamlessly interact with the Google Cloud API, facilitating the creation of schedulers, Pub/Sub topics, Cloud Functions, and the deployment of trading bots to Google Cloud.
- Employed Terraform and the python-terraform module to establish and configure Google Storage Buckets, optimizing storage for Python scripts associated with the trading bot.
- Designed and implemented an iOS app using Swift and SwiftUI, featuring secure login and registration functionality backed by Firebase authentication.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, Swift, C#
Frameworks: TensorFlow, PyTorch, Django, React, Node, Flask
Developer Tools: Git, Docker, Google Cloud Platform, Azure, VS Code, Visual Studio, STM32CubeIDE
Libraries: pandas, NumPy, Matplotlib, python-terraform, Sklearn, GSAP, Lenis, Selenium, Scrapy