Sion Gang

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Technical Skills

Languages: Python, TypeScript, C, C++, Java, JavaScript, SQL, Tailwind CSS
Frameworks/Tools: Node.js, React.js, Next.js, FastAPI, AWS, Flask, Django, Git, KiCad, Selenium
Libraries: Pytorch, TensorFlow, Scikit-learn, Pandas, NumPy, SciPy, OpenCV, OpenAI

Experience

AI Automation Engineer Jan 2025 – April 2025
Supernova MGU *Toronto, ON*

- Developed async OpenAI agents to research social media trends **150% faster** using **BrightData** and Piloterr APIs
- Built and deployed internal **Streamlit** app via Docker/Railway to operationalize AI agents for data science workflows
- Automated social media content generation using AI agents trained on live data resulting in **50% more engagements**
- Monitored Azure errors with AI agents, auto-logged and categorized issues in Airtable to accelerate debugging

Software Developer Oct 2022 – June 2024
Metropolis *Toronto, ON*

- Developed interactive features, including JavaScript games, **increasing monthly website traffic by 35%**
- Built a customizable calendar in **React.js**, leveraging **REST APIs** for event updates and backend synchronization
- Integrated interactive features into the **Django stack**, optimizing performance across desktop and mobile platforms

Firmware Developer Sept 2024 – Present
University of Waterloo Orbital *Waterloo, ON*

- Integrated **LM75BD** temperature sensor with **I2C**, utilizing **FreeRTOS** for task management and data handling
- Designed a thermal management system, ensuring optimal temperature regulation and preventing overheating.
- Implemented an OS interrupt handler to execute over-temperature shutdowns, ensuring device safety

Organist and Junior Music Director Aug 2023 - June 2024
Fellowship Presbyterian Church *Toronto, ON*

- Led a **choir of 11**, organizing weekly rehearsals to deliver polished performances for a **100+ congregation**.
- Composed and arranged cantatas for seasonal holidays, successfully managing long-term project timelines
- Shared original compositions on my Youtube Channel, garnering **98,000 listens annually**

Projects

Wearable AI Fall Detection Device | | *C, TensorFlow, STM32, SolidWorks* Sept 2024 – Present

- Trained a **TensorFlow** neural network on fall data, **achieving 96% accuracy** through rigorous data preprocessing
- Calibrated real-time data collection from LSM9DS1 IMU with **C** and sensor fusion, **reducing false alerts by 30%**
- Developed circuit schematics and 3D-modeled the device housing using **SolidWorks** to ensure durability

ML Music Accompaniment Composer | | *Python, Jupyter, Mathplotlib, Pandas* Aug 2023 - Sept 2023

- Trained scikit-learn models to generate musical accompaniment based on user-provided melodies
- **Scraped 200+ MusicXml files** from Musescore.com to create a robust training dataset
- Optimized data preprocessing pipelines by data categorization automation, **improving model accuracy by 160%**.

Dynamic Midi Visualization Application [Demo] | *Python, PySide6, Pygame* June 2024 – Present

- Built a **full-stack** application that analyzes the notes of a song and generates dynamic visualizations
- Developed a user-friendly GUI with **PySide6**, enabling intuitive interaction and customization of visualizations
- **Optimized the visual generator to process 400 notes/min,** improving performance by **260%**

Charisma Coaching AI - doubleURizz | | *Python, Flask, DeepFace, OpenAI* Sept 2023 – Oct 2023

- Created a **ChatGPT-3.5 powered assistant** to provide personalized training for improving user's charisma
- Developed a web application with **Flask** that enables real-time interaction with the bot, offering actionable insights
- Integrated **DeepFace** to perform real-time facial expression analysis and sentiment detection using **OpenCV**
- Implemented **speech recognition** for seamless conversation, enhancing user engagement and accessibility

Education

University of Waterloo Waterloo, ON
Bachelor of Applied Science in Computer Engineering *Sept 2024 – Present*