Peterson Guo

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EDUCATION

University of Waterloo Waterloo, ON
BASc in Honours Electrical Engineering, Specialization in Artificial Intelligence *08/2023 – Present*
- cGPA: 3.8/4.0
- Active member of Data Science Club, Waterloo Formula Electric - Firmware, Electrical

TECHNICAL SKILLS

Languages: C/C++, Python, Java, JavaScript, Typescript, C#, Bash, Terraform, HTML/CSS, Dart
Frameworks/Libraries: Tensorflow, NumPy, Docker, Spark, Pandas, Node.js, Flask, FastAPI, Django, React.js, Vue3
Databases/Cloud: AWS, Google Cloud, Azure, Snowflake, MongoDB, PostgreSQL, MYSQL, Redis, Vercel, Firebase

EXPERIENCE

Security Developer 01/2024 – 5/2024
eSentire *Remote*
- Developed a threat analytics dashboard that significantly boosted client engagement through enhanced data visualization and automated reporting, becoming a key project and driving strategic adoption of advanced analytics.
- Enhanced **data management** efficiencies by developing a JSON-to-database conversion function, significantly improving the handling and processing of complex data structures.
- Led the automation of deployment processes across four major projects, **enhancing efficiency by 10%** through the strategic use of Terraform templates.
- Dramatically increased the **efficiency** of incident reporting functions by over **400%**, enhancing data processing and storage capabilities through optimized algorithms.
- Enhanced the logging and **security protocols** for multiple projects, standardizing methods to ensure robust access control and system monitoring.
- Developed and contributed to an **open-source PCAP scrubber** project, enhancing tool capabilities by implementing features that remove sensitive information, thus facilitating safe and effective training for network analysts.

Simulation Developer 06/2023 – 09/2023
COBWEB, University of Toronto *Toronto, ON*
- Developed and maintained simulation models such as particle physics, computer vision, and spring-mass systems.
- Developed and optimized health-related research simulation models using C++ and Java, achieving a **15% reduction in memory usage** and a **10% increase in processing speed**.

Full Stack Developer 05/2023 – 09/2023
Broadcast Fantasia *Markham, ON*
- Developed and maintained custom Shopify apps to enhance e-commerce functionality and **improve user experience**
- Collaborated with cross-functional teams, including designers and project managers, to deliver high-quality solutions on time and within budget.
- Conducted testing and debugging to ensure the **functionality, security, and performance** of Shopify apps.
- Implemented and maintained integrations with third-party APIs to enhance app features and capabilities.

Software Engineer 05/2022 – 06/2023
Trubotics *Markham, ON*
- Designed mechanical components using Fusion360, incorporating principles of mechanical design and software engineering. This demonstrated a blend of skills for **optimal performance**.
- Engineered competitive autonomous strategies through the development of C++ algorithms, using sensor technologies. This catapulted the **competition ranking from 135th to 31st**, showcasing expertise in **sensor integration** and **algorithm development**.

PROJECTS

InvestIQ 05/2024 – 05/2024
- Used LSTMs and neural networks to fit data from historical stock prices to determine the next day's closing price, accurately predicting the closing price within 2%.

Sentiview 01/2023 – 10/2023
- Developed a web scraping tool to extract customer reviews through the application of Python and BeautifulSoup, using Cohere for **NLP** analysis, processing over **10,000** reviews, contributing to a **25% improvement** in customer satisfaction.

Assisted Reader 10/2022 – 09/2023
- Integrated text-to-speech conversion for aiding vision disabilities through the development of an **OCR system**, using Tesseract, ESP32 camera, and autocorrect technologies, providing a practical solution for individuals with vision impairments.

MindBridge — Major League Hackathon Winner 02/2024 – 02/2024
- Worked on the backend, creating authenticated endpoints for the application to access user data from a database

ACADEMIC PROJECTS

Bionic Evo 09/2023 – 11/2023
- Engineered an advanced prototype of a humanoid arm for amputees utilizing STM32, Arduino, and CubeIDE, integrating **neural networks** for precise gesture classification and control.

Malevolent Uses of Data Science and Ethical Limitations in the Age of AI 09/2023 - 11/2023
- Researched the malicious uses of AI on cybersecurity and new emerging threats on LLMs.