Peterson Guo

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TECHNICAL SKILLS

Languages: Java, Python, C/C++, JavaScript, HTML/CSS, C#, Bash, Terraform, Typescript
Frameworks and Libraries: React, Flask, Nextjs, NumPy, Tensorflow, OpenCV, AWS, Azure, Vue3, FastAPI, Snowflake
Tools and Technologies: Cybersecurity, Networking, Algorithm Implementation, Embedded Systems, Linux/Unix, Git

EXPERIENCE

Security Developer
01/2024 – 5/2024
eSentire — *Remote*

- Accomplished significant improvements in data management through the development of a recursive function for JSON-to-database conversion, using advanced programming techniques. This enhanced the processing capabilities for complex data types.
- Automated FastAPI deployment to AWS through the creation of a Terraform template, using endpoint logging and SQS queue data processing. This standardized deployment across 8 projects, facilitating a smoother and more efficient development workflow.
- Achieved a 400% increase in processing speed for the Incident Report function through the implementation of Python list comprehension, using optimized algorithms to enhance efficiency in data retrieval and storage.
- Led the design and implementation of a Vue3 component for a threat dashboard through the integration of MDR insights and automated PDF report generation, using Vue.js and PDF generation technologies. This improved client engagement and intelligence delivery significantly.
- Contributed to the development of proprietary software for emerging threat detection, underlining my expertise in handling projects with high confidentiality and complexity.

Full Stack Developer
05/2023 – 09/2023
Broadcast Fantasia — *Markham, ON*

- Enhanced e-commerce functionality and user experience through the development of custom Shopify apps, using Shopify's API and web development best practices. This led to a 4% increase in customer engagement metrics.
- Ensured optimal functionality, robust security, and high performance of Shopify apps through comprehensive testing and debugging, using automated testing tools. This resulted in a 99.5% uptime and a 5% reduction in customer-reported issues.
- Expanded app features and capabilities through integrations with over 5 third-party APIs, using RESTful API standards. This contributed to a 15% increase in app functionality and user satisfaction.

Simulation Developer
06/2023 – 09/2023
COBWEB — *Toronto, ON*

- Developed and enhanced simulation models for health-related research through software engineering applications in scientific contexts, using C++ and Java. This optimized code resulted in a 15% reduction in memory usage and a 10% increase in speed.

Robotics Developer
05/2022 – 06/2023
Trubotics — *Markham, ON*

- Designed mechanical components for optimization through the application of Fusion360, using 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

Bionic Evo
09/2023 – 11/2023

- Built a prototype for a humanoid arm for amputees through embedded systems development, using STM32, Arduino, CubeIDE, Neural Networks, and Regression Analysis. This incorporated advanced control and gesture classification features.

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. This processed 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. This provided a practical solution for individuals with vision impairments.

EDUCATION

University of Waterloo
Waterloo, ON
Bachelor of Applied Science in Honours Electrical Engineering, Specialization in Artificial Intelligence
08/2023 – Present

- Active member of Data Science Club, Waterloo Formula Electric - Firmware, Electrical
- cGPA: 3.9/4.0