Steven Song

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PROFESSIONAL EXPERIENCE

Software Engineer   **May 2022 – Present**
Teledyne FLIR   Richmond, Canada

- Led the successful migration of the company's database to Elasticsearch Cloud, significantly enhancing database reliability and minimizing risks of blocking production. Implemented a seamless transition with zero downtime, utilizing effective collaboration and risk management strategies that increased company-wide recognition of the team's achievements.
- Pioneered the development of a ground-up calibration infrastructure for the company's new product introduction. This involved breaking down a monolithic application into efficient microservices, redesigning the user interface to improve operational efficiency and intuitiveness, and implementing a caching system to enhance system performance.
- Engineered a robust solution for the efficient migration of 7 TB of critical production data to AWS S3, ensuring data integrity and boosting transfer speeds tenfold. Utilized asynchronous programming and an Exponential Backoff retry algorithm to mitigate data loss risks and increase application robustness.
- Developed an innovative visualization tool for the software architecture, enhancing team comprehension of the infrastructure network, speeding up the onboarding process for new hires, and streamlining daily management of our complex systems.

Full-Stack Developer - Co-op   **Sep 2021 – Apr 2022**
Greenlight Innovation   Burnaby, Canada

- Contributed to the development of a comprehensive project management tool, integrating issue tracking, bug tracking, and agile project management functionalities, utilizing Angular and ASP.NET Core to enhance project oversight and efficiency.
- Built, maintained, and expanded several RESTful Web APIs, facilitating efficient database queries and supporting the seamless flow of information across platforms
- Designed and implemented new front-end features that significantly reduced issue creation time and enhanced the user experience

Research Assistant - Co-op   **Sep 2019 – Sep 2020**
University of British Columbia   Vancouver, Canada

- Maintained and expanded a PostgreSQL database to efficiently handle collected experimental data.
- Developed Python scripts for comprehensive data analysis and visualizations
- Maintained and improved the codebase for lab instruments, optimizing performance and reliability

EDUCATION

University of Michigan   **Jan 2023 – Present**
Master of Applied Data Science   Ann Arbor, USA

- GPA 3.9/4.0
- Projects: Real Estate Dashboard, Stock Sentiment Analyzer
- Coursework: Data Mining, Scalable Data Processing, Information Visualization, Supervised Learning, Unsupervised Learning, Causal Analysis, Reinforcement Learning, Natural Language Processing

University of British Columbia   **Sep 2016 – May 2022**
Bachelor of Applied Science - Computer Engineering   Vancouver, Canada

- Co-op program: 5 terms completed (20months).
- Projects: Hand Gesture Controlled Robot Pet, Rental Tinder
- Coursework: Data Structures and Algorithms, Operating Systems, TCP/IP, Databases, FPGA, embedded systems

TECHNICAL SKILLS

Languages: C/C++, C#, Python, JavaScript/TypeScript
Scripting: Bash, Batch, PowerShell
Frameworks/Tools: Node.js, Next.js, Angular, MQTT, SignalR
Databases: MySQL, PostgreSQL, MongoDB, DynamoDB, Elasticsearch
Tools: Git, SVN, Docker, Jenkins, Postman, ELK(Elasticsearch, Logstash, Kibana), Filebeat
Libraries: pandas, NumPy, scikit-learn, PyTorch, Matplotlib, Vega-Altair, Seaborn

CERTIFICATIONS

AWS Certified Cloud Practitioner | Deep Learning Specialization