Brian Zhang

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Skills

Languages	C++, Java, Kotlin, Python, Go, SQL
Tools and Frameworks	PySpark, TensorFlow, PyTorch, Scikit-learn, Git, Docker, AWS

Work Experience

Behaviour Interactive
Montreal, QC

Backend Engineer — *Aug 2023 - Aug 2024*

- Developed server tools and RESTful APIs with NodeJS to improve user data collection and support ongoing game design updates for the company's flagship product Dead by Daylight
- Designed and implemented cross-progression services, enabling 1+ million daily users to synchronize player progress across six different platforms using AWS DynamoDB for real-time data storage and OAuth for secure authentication across platforms
- Led the transition from Elasticsearch to Datadog for log aggregation and monitoring, improving backend system performance through real-time alerts and efficient log retrieval

Bumblebee Spaces
San Francisco, CA

Software Engineer Intern — *Sep 2022 - Dec 2022*

- Developed front-end and back-end features for a smart home automation system using React and Go, enabling remote management of ceiling-mounted furniture and storage units
- Implemented a computer vision-based object detection system using TensorFlow and OpenCV to identify and track items in storage units for automated retrieval
- Leveraged AWS API Gateway and AWS Lambda to develop a mobile application with seamless communication with the smart home system, adding support for remote system management, configuration, and dynamic voice commands

Lifion by ADP
New York, NY

Machine Learning Engineer Intern — *May 2022 - Aug 2022*

- Developed and maintained ML-driven features to enhance HR management tools, including personalized search and recommendation systems for employee resources
- Performed data engineering with PySpark and SQL to process large-scale data, improving recommendation system performance and operational efficiency for users
- Implemented numerous interactive data visualization dashboards for machine learning models and DevOps workflows using NodeJS and React, enabling insights into model performance and user behavior

Sony Interactive Entertainment
Toronto, ON

Frontend Engineer Intern — *Sep 2021 - Dec 2021*

- Developed and maintained UI and shopping features for the PlayStation Store using React, enhancing user experience for 40+ million subscribers by collaborating closely with UX design teams to improve navigation and functionality
- Designed and implemented the architecture of the PlayStation Plus subscription system, improving its integration and performance across various devices
- Refactored the product purchase flow, improving transaction efficiency and reducing app crashes by optimizing front-end code, resulting in a more stable and responsive user interface

Projects

Accident Hotspot Detector

Python, PySpark, Scikit-learn

- Developed a model to identify traffic accident hotspots in San Jose, using clustering techniques (K-Means, DBSCAN) to identify accident-prone areas based on factors like accident frequency, severity, and environmental conditions
- Processed large-scale geospatial data with PySpark, implementing feature engineering for accident risk assessment
- Applied supervised learning techniques (Random Forests, SVM) to assess risk levels of hotspots in San Jose with 78% accuracy

Education

San Jose State University
San Jose, CA

Master of Artificial Intelligence - 3.8 GPA — *Sept 2024 - Apr 2026*

University of Waterloo
Waterloo, ON

Bachelor of Computer Science - 3.8 GPA — *Sept 2018 - Apr 2023*