Rajvir Parmar

647-548-8660 rajvirparmar32@gmail.com rajvirparmar.ca rajvir31 rajvir31

Education

- **Western University** **Expected Graduation: April 2026**
  *BSc - Honours Specialization in **Computer Science** – GPA **3.9** (Dean's List Scholar)* London, ON

Work Experience

- **Solink** **Sep 2025 – Dec 2025**
  Software Engineer Intern *Ottawa, ON*
  - Incoming internship on the **R&D team**, contributing to the **design, development, and support** of Solink's embedded and cloud-based systems using **C/C++** (device logic), Linux, **Jenkins (CI/CD)** and **Kubernetes/Docker** (deployments)

- **Riipen Networks Inc.** **May 2024 – Aug 2024**
  Software Engineer Intern *Toronto, ON*
  - Designed a real-time equipment monitoring system using **Python** and **RESTful APIs**, reducing downtime by **14.7%** with proactive maintenance alerts and enabling detailed cost analysis for optimized financial planning
  - Developed a **TypeScript-based command-line** application to monitor and secure IoT manufacturing equipment, integrating a **Jenkins CI/CD pipeline** to streamline updates and resolve **83 access inconsistencies/month**
  - Revamped inventory management with a **React, Node.js, Kubernetes, and PostgreSQL** based analytics system, enabling real-time tracking across multiple warehouses and saving **$132,000 annually** in reduced overstock costs

- **Loblaw Digital** **Sep 2023 – Dec 2023**
  Data Science Intern *Toronto, ON*
  - Deployed optimized **XGBoost ensemble models** for real-time fraud detection, reducing inference latency from **10s to 5.6s** and enhancing transaction flow across live financial systems
  - Engineered predictive features from **10TB+ eCommerce data** using **PySpark and SQL** (e.g., time-on-page, category recency), improving purchase intent classification precision from **0.78 to 0.92** and enabling more accurate customer targeting
  - Implemented a **multimodal recommendation engine** using **PyTorch** and **TensorFlow**, boosting top-N accuracy by **18%** across **1.5M+ user interactions**, leading to increased product engagement and higher conversion rates

- **Scotiabank** **Jan 2023 – Apr 2023**
  Data Intern *Toronto, ON*
  - Refactored **Python** ETL pipelines in **GCP** by eliminating redundant I/O and optimizing **BigQuery** joins, cutting data processing time from **120 to 30 minutes** and delivering real-time sales forecasting capabilities to business stakeholders
  - Analyzed **100K+ customer transactions** using **SQL and SAS**, identifying product bundling gaps and churn indicators that directly contributed to an **8% increase** in insurance sales

Projects

- **Thesis Project: Predicting Financial Markets Using ML & Big Data** **May 2025 – Aug 2025**
  Western University *London, ON*
  - Designed and implemented a full ML pipeline in **Python** using **XGBoost**, including data ingestion from the **GDELT** dataset, feature engineering with historical S&P 500 data, model training, evaluation, and performance visualization.
  - Trained an **XGBoost classifier** on structured global event data and historical prices to predict S&P 500 movement, achieving **91.8% accuracy** on held-out historical data—surpassing a **baseline of 52.8%** and highlighting the value of event-driven features

- **PETHAVEN** **Sep 2024 – Dec 2024**
  ***Technologies**: Java, CSS, JavaFX, Node.js, JSON, Shell Scripting* *London, ON*
  - Engineered a modular virtual pet game in **JavaFX** with real-time state synchronization, autosave via file I/O serialization, and scalable inventory management; optimized UI responsiveness and event handling for smooth gameplay
  - Deployed game to **itch.io** and drove **250+ player sessions** via targeted Discord communities and class demos; leveraged session tracking and feedback loops to improve UX, increasing average playtime by **42%**

Skills

- **Programming Languages**: Python, Java, C/C++, TypeScript, JavaScript, SQL, HTML/CSS, R
- **Frameworks/Tools**: AWS, PyTorch, TensorFlow, XGBoost, PySpark, Docker, Kubernetes, Jenkins, Airflow, Git, React, Node.js, Vue.js
- **Concepts/Interests**: High-Performance & Low-Latency Systems, Modern C++ (C++17/20), Distributed Systems & Parallel Processing, Networking Protocols & Exchange Gateways, Data Structures & Algorithms, Operating Systems & Concurrency, Performance Optimization & Profiling, Regression Analysis & Data Mining (Python, Pandas, NumPy), Trading Infrastructure & Algorithmic Systems, Hardware-Software Interaction, Problem-Solving in Real-Time Environments, Continuous Learning & Innovation