Yuvraj Sharma

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EDUCATION

University of Western Ontario | London, ON *April 2028(Expected)*
Honours Specialization in Computer Science (BSc) Minor in Data Science *(3.6/4.0 GPA)*
- Relevant Coursework: Data Structures & Algorithms, Linear Algebra, Machine Learning, Statistics for Data Science, Database Systems, Frontend Development, Discrete Math

TECHNICAL SKILLS

Languages & Frameworks: Python (NumPy, Pandas, scikit-learn, TensorFlow, PySpark), SQL (PostgreSQL, MySQL), JavaScript (React.js, Node.js), Teradata
Data Analysis & Visualization: Network Analysis (NetworkX), Predictive Modelling (Random Forest, XGBoost, Linear Regression), Statistical Analysis (t-tests, correlations, regression), Matplotlib, Seaborn, Plotly, PowerBI, Tableau, VBA, Splunk
Tools & Platforms: Jupyter, Git, Docker, AWS, Azure, Snowflake, BigQuery, Excel, Databricks, GCP, Prompt Engineering

RELEVANT EXPERIENCE

Western Developers Society **London, ON**
Project Manager *September 2025 - Present*
- Led cross-functional teams of developers and designers to deliver end-to-end software projects, owning sprint planning, task breakdown, and milestone execution across multiple parallel initiatives.
- Designed and enforced agile workflows using structured standups, sprint retrospectives, and backlog grooming, improving on-time feature delivery and reducing scope creep.
- Coordinated requirements gathering with technical and non-technical stakeholders, translating product goals into actionable engineering tasks and clear technical specifications.
- Tracked project progress using KPIs and delivery metrics, proactively resolving blockers and reallocating resources to maintain development velocity.

PFSL Investments Canada Ltd. **Mississauga, ON**
Operations Analyst Intern May 2025 -August 2025
- Respond to 80-100 daily client and advisor emails regarding KYC updates, redemptions, transfers, and account maintenance, ensuring a 95% same-day resolution rate.
- Review and analyze an average of 75+ KYC, subsequent investment, and PAC (Pre-Authorized Contribution) forms daily for accuracy and completeness before processing.
- Coordinate with branch managers on client documentation, ensuring correct routing of ~40 forms daily to fund companies or internal teams for timely processing.

WesternAI **London, ON**
AI Developer *October 2025 - Present*
- Led applied ML research to develop novel predictive modeling approaches, designing experiments across multiple architectures and evaluation protocols to push state-of-the-art performance on real-world structured datasets.
- Built end-to-end training pipelines in Python, implementing cross-validation, hyperparameter optimization, and model ablations to validate robustness and eliminate performance leakage across data splits.
- Engineered 75+ high-signal features and learned representations, combining statistical tests with embedding-based methods to improve generalization, interpretability, and downstream decision-making impact.
- Designed rigorous evaluation suites including out-of-distribution testing, slice-based performance audits, and calibration checks to stress-test model behavior under edge cases and ensure production-ready reliability.

PROJECTS

Verse | FastAPI, Python, PostgreSQL, Alembic, Redis, JWT, Next.js 14, TypeScript, Tailwind CSS, shadcn/ui, Vercel
Built a full-stack platform for alternative investment portfolio management with ALM analytics and liquidity forecasting
- Engineered a full-stack alternative investment portfolio management platform supporting PE, Real Estate, VC, and Infrastructure funds, delivering ALM analytics, liquidity forecasting, scenario modeling, and automated risk monitoring.
- Built an in-house ML forecasting engine using LightGBM regression + time-series feature engineering to predict DPI, TVPI, IRR, and forward cashflow/liquidity buffers, enabling proactive portfolio planning under multiple stress scenarios.
- Built and sold a full-stack alternative investment portfolio management platform to family offices and RIAs, enabling ALM analytics, liquidity forecasting, scenario modeling, and automated risk alerts.

Real-Time News Sentiment Trading Engine | PyTorch, scikit-learn, NLP, WebSockets, Backtesting, Quant Risk Controls
Built a real-time sentiment-driven algo trading pipeline for signal generation and backtesting
- Engineered a low-latency ingestion + processing pipeline aggregating 50,000+ posts/articles per day, performing deduplication, spam filtering, entity resolution, and ticker mapping across 500+ symbols into trade-ready time-series data.
- Built a quantitative sentiment scoring stack combining financial lexicon scoring, transformer embeddings, and volatility-adjusted weighting, producing 30+ alpha features including sentiment z-scores, shock detection, persistence signals, and cross-source confirmation metrics.
- Implemented an institutional-style backtesting + walk-forward optimization framework across multiple sectors and market regimes, tuning signal thresholds, position sizing, and risk constraints to benchmark risk-adjusted returns, drawdown, and hit-rate vs baseline strategies.

Bank Customer Churn Prediction | Python, Pandas, NumPy, scikit-learn, XGBoost, SHAP, Matplotlib, Seaborn
Analyzed customer behavior and financial features to predict churn and guide retention strategies
- Built a production-ready ML pipeline predicting churn for 10,000+ banking customers, achieving 86% accuracy and 0.86 ROC-AUC using XGBoost
- Engineered 13+ features (demographics, engagement, account activity, interaction terms), improving high-risk customer recall by ~30%
- Deployed an interactive Streamlit app enabling real-time churn prediction and targeted retention strategies for the top 20% at-risk customers