Ali PiyarAli
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PROFILE

Software Engineer | CPA | Master's in Software Engineering | 15+ Years in Finance & Data Science
Finance leader turned software engineer. Skilled in Python, BI tools, ML, and cloud technologies to drive scalable solutions and strategic growth. Passionate about innovation at the intersection of finance and technology.

EDUCATION

Master of Liberal Arts in Software Engineering | Harvard University, *Harvard Extension School* | 2020 - 2023
Bachelor of Commerce | York University | 2013

SKILLS

- **Languages & Frameworks**: Python, Scala, JavaScript, SQL, OCaml, C++, GraphQL, Django, React, FastAPI
- **Database, Big Data & Streaming, BI & Automation**: PostgreSQL, MySQL, MongoDB, Redis, Neo4j, Amazon RDS, AWS Timestream, Cassandra, Spark, Kafka, Flink, Hadoop, Airflow, Power BI, Kibana, Elasticsearch, Selenium.
- **Data Science, Analytics, Cloud & DevOps**: Pandas, NumPy, TensorFlow, PyTorch, Keras, AWS, Docker, Git, CI/CD

PROJECTS

Financial Big Data Analytics (2025) *(Tech Stack: Scala, Python, Spark, Kafka, Elasticsearch, and Kibana)*
- Built a financial data pipeline to process and analyze large-scale datasets from the SEC EDGAR database.
- Designed visualizations in Kibana and Elasticsearch to highlight key financial ratios and trends.

Generative Adversarial Networks for Image Generation (2024) *(Tech Stack: Python and TensorFlow)*
- Built DCGAN & WGAN models to generate high-quality fashion images. Tech Stack: Python and TensorFlow

Speech Synthesis and NLP (2024) *(Tech Stack: Python and TensorFlow)*
- Developed text-to-speech and NLP answer generation, optimizing performance with hyperparameter tuning.

Drug Safety Knowledge Graph – (Harvard & Pfizer Collaboration) (2023)
(Tech Stack: Python, Django, Next.js, Neo4J, GraphQL, and SQLite)
- Developed a full-stack knowledge graph application linking drugs, genes, and adverse effects relationship (124K nodes and 68M relationships). Developed a Jaccard similarity score to show entity relationships visually.
- Reduced data processing time by 90% using optimized pipelines.

    Presented the app with Pfizer at the 4th Annual Pharma AI Summit hosted by Global BSG in London, UK.

VR Operating Room Simulation (2022) *(Tech Stack: C# and Unity)*
- Developed a medical training VR app for simulating surgical procedures.

WORK EXPERIENCE

Project Lead, SAP Implementation | Toronto Transit Commission (TTC) | Jul 2022 – Dec 2024
- Designed data migration process for SAP System integration. Led user acceptance testing and training.

Operations Financial Control Analyst | Toronto Transit Commission (TTC) | Feb 2017 – Jul 2022
- Automated financial reporting & forecasting using Python and Pandas, reducing reporting time by 50%.
- Developed predictive models for budgeting & risk assessment, achieving 20% variance reduction.

Cost and KPI Analyst | Toronto Transit Commission (TTC) | Jan 2015 – Feb 2017
- Crated a real-time dashboard and KPIs from 5.7M+ datapoints using statistical models.