

Amiel Nurja

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EDUCATION

University of Toronto

Honours Bachelor of Science in Computer Science, Focus in AI (cGPA 3.5/4.0)

Toronto, CA

June 2025

PROFESSIONAL EXPERIENCE

TD Bank

Software Engineer I

Toronto, CA

May 2025 - Present

- Engineered Java ETL pipelines to unify multi-source customer data into centralized dashboards for TD enterprise use, streamlining workflows for 1,000+ employees by consolidating customer transaction and liability data.
- Spearheaded document data management system in Java (Spring Boot), automating real-time processing and retrieval of financial statements and customer transaction records for 20,000+ employees on Azure.
- Developed Datadog dashboards for transaction monitoring and anomaly detection, implementing automated alerting at defined thresholds and analyzing transaction patterns to identify system errors and performance issues.

Software Developer I

June 2024 - May 2025

- Developed and maintained automated compliance attestation system using Python and PowerShell, validating 100% of ActiveDirectory identities against internal data feeds, eliminating manual review processes for 40,000+ users.
- Implemented OpenID Connect authentication with PingFederate for Spring Boot application using Spring Security, designing new entry path flows for users logging in directly and via single sign-on from partner applications.
- Updated network storage URL references in production SQL Server tables using pattern-matching queries, modifying file paths without disrupting consumers.

Software Engineer Intern

May 2022 - June 2024

- Automated PDF document processing using Java and Apache PDFBox, implementing pre-population logic for multiple document types, ensuring accuracy of data and saving an estimated 1,000 hours annually.
- Analyzed and documented end-to-end credit card authorized user workflows, mapping IMS transaction sequences and API integrations to support development of cardholder simulation tools for automated test data creation.
- Led a team of five interns to create a Figma prototype of the *TD Intern Hub*. Collaborated with TD Early Talent to implement the solution in SharePoint, and is used today for current interns.

PROJECTS

Biking Around Toronto

GitHub Link

Jan. 2025 - Apr. 2025

- Collaborated in a team of three students to build a web application that tells a story about biking in Toronto through data visualizations using D3.js, Bootstrap and Azure.
- Developed interactive Bike Share station visualization with synchronized map, bar charts, and summary views.
- Implemented serverless data pipeline using Azure Functions for scheduled API data ingestion.

Fraudulent Bitcoin Transaction Detection - Graph Neural Network Research

GitHub Link

Dec. 2024

- Implemented graph neural networks (GCN, GAT, RNN) for fraud detection on the Elliptic dataset, optimizing models using Hilbert-Schmidt Independence Criterion (HSIC) to identify illicit Bitcoin transactions.
- Optimized data pipeline using sparse matrices instead of traditional graph structures, reducing memory usage and improving training speed by avoiding costly graph construction.
- Conducted comprehensive hyperparameter analysis across multiple architectures, comparing convolutional, attention-based, and recurrent approaches for anomaly detection in transaction networks

TECHNICAL SKILLS

Languages: Java, Python, JavaScript

Web Development: Spring Boot, React, Angular

Cloud/DevOps: Azure, AWS, GitHub Actions

Databases: PostgreSQL, MS SQL Server, MongoDB, Redis