

Nathan Embaye

Software Engineer

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Education

- September 2015
- December 2020
- Carleton University** - Ottawa, Canada
Bachelor of Computer Science, emphasis in Software Engineering
Bachelor of Global and International Studies, emphasis in Politics

Experience

- February 2024
- Present
- Yelp - Ads UX Platform Team** - Software Engineer
Improving the Advertisement experience on our web-applications.
- May 2022
- January 2024
- Bank of Canada - Data Operations Team** - Software Engineer
Created scalable ETL/ELT pipelines for batch-processing using Azure Data Factory as an orchestrator. Performed data validation/transformation using Spark, Databricks and Python for distributed processing. Developed then ran unit, integration and functional tests for new features and releases with PyTest. Monitored data pipelines and implemented their email/SMS alerts using Azure Log Analytics. Handled ad-hoc data ingestion requests from economists performing regression analysis.
- February 2021
- April 2022
- Bank of Canada - Analytic Environments Team** - Software Engineer
Created a serverless Node.js app in Azure Functions which used JavaScript and implemented API polling. Built CI/CD pipelines in Azure DevOps, increasing production deployment speed by 80%. Performed data modeling for data lake and data warehouse while documenting everything on Confluence. Wrote and optimized SQL queries for researchers publishing business intelligence reports. Migrated historical data from an on-premise Oracle SQL database to Azure Blob Storage.
- September 2020
- December 2020
- Carleton University - Object Oriented Software Engineering** - Teaching Assistant
Assisted students in developing iOS and Android mobile apps by introducing user stories and Git. Guided implementation of different design patterns and architectural styles.
- July 2020
- October 2020
- Transport Canada - Dangerous Goods Team** - UI/UX Design Intern
Used Figma to develop wireframes, mock-ups and prototypes satisfying user requirements. Conducted user research through usability testing, A/B testing and user interviews.
- September 2019
- December 2019
- Canadian Air Transportation Security Authority - Reporting Team** - Data Analyst Intern
Automated reports of airport passenger screening speed Canada-wide. Cleaned and normalized data for national incident reports. Black-box testing for Cognos Developers.

Projects

- May 2023
- Streaming Pipeline** - github.com/nathanembaye/coinbase-pipeline
Java app ingesting real-time data via Coinbase web-sockets. Message handling with Kafka. Google Protobuf for serialization. Spark Structured Streaming for processing. Stored in Cassandra NoSQL database.
- January 2023
- Tapology** - github.com/nathanembaye/tapology
Web-scraper made with Python and Selenium. Scraped two decades of tapology.com user data to find how often members predicted UFC match winner, method of victory, and winning round correctly.
- September 2019
- Vibecheck** - github.com/nathanembaye/vibecheck
React-Native mobile app written in TypeScript. Interprets user queries and returns songs matching the depicted emotion/mood. Spotify API for song retrieval and Figma for [mock-ups](#).

Technical

Languages: Python, Java, JavaScript, SQL
Tools: Linux, Git, AWS/Azure, React, Kafka, Protocol Buffers, Parquet, Node.js
Datastores: Azure Blob Storage, S3, MySQL, MongoDB, Cassandra
Interests: API development, streaming data pipelines, distributed systems