

Nathan Embaye

Software Engineer

Ottawa, Canada

nathanembaye.com

github.com/nathanembaye

nathanembaye26@gmail.com

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

May 2022

- Present

Bank of Canada - Data Operations Team - Software Engineer

Created scalable ETL/ELT pipelines for batch-processing on Azure, using 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 with PyTest and Postman. Monitored data pipelines and implemented their email/SMS alerts with Azure Log Analytics. Handled ad-hoc data ingestion requests from economists performing financial analysis.

February 2021

- April 2022

Bank of Canada - Analytic Environments Team - Software Engineer

Created a serverless JavaScript Node.js app in Azure Functions, using an asynchronous HTTP API pattern. 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 stakeholders 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.

April 2019

- September 2019

Taggart Group - Infrastructure Team - IT Analyst Intern

Installed/configured operating systems and apps. Monitored/maintained computer hardware and networks. Managed Active Directory accounts registration, privacy, etc.

Projects

May 2023

Streaming Pipeline - github.com/nathanembaye/coinbase-pipeline

Java app ingesting real-time data via Coinbase web-sockets. Message handling with Apache 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, Node.js

Datastores: Azure Blob Storage, S3, PostgreSQL, MongoDB, Cassandra

Interests: API development, streaming data pipelines, distributed systems