Precious Kolawole

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EXPERIENCE

Shopify   08/2022 — present | Ottawa, Canada
Applied Machine Learning Engineering
- Implemented a data **backfill** pipeline using Apache Beam, Dataflow and Kafka(Monorail) to migrate large-scale ML model predictions from **BigQuery** into **Shopify's Core Mysql** database, including **Throughput** and **Rate Limiting**.
- Integrated a **Flux AI Image Generator Model** within Shopify's Merchant Admin **Chat Tool** for **product image** generation using **Textual Prompts** and Product Reference Images, including Feature Gating, and **Fraud Prevention** measures.

Backend Engineering Intern
- Overhauled the Shopify API **Deprecation**, API **Versioning** and API **Breaking Changes** pipelines that served the entire Engineering Discipline, 3rd Party Developers and Merchants.
- Improved the Graphiql **Search Query Debugging** experience by **30%** for 3rd Party Developers and Merchants.

Frontend Engineering Intern
- Launched **Unified Analytics** (reporting experience dashboard across Shopify) with my team, a product directly supervised by Shopify CEO **Tobi Lutke**, which made the top 5 products at Shopify **Editions 2024**.
- Converted raw merchant data into meaningful **metrics** that helped > **2.1 million** merchants draw **insights**.
- Built optimized **data models** across the Shopify Web Admin; this prevented **data loss** and increased our **merchants' database** by **55%**.

Carleton University   11/2023 — present | Ottawa, Canada
Research Assistant
- Methods Paper: **Improving Concussion Diagnosis with Visual Eye Tracking and Ocular EMG Analysis**.
- Used Opencv **HoughCircle** with **Dlib Face Recognition** Library to track human **pupils** for x-y coordinates in concussed subjects' recorded video frames.
- Built an **eye coordinates time series data alignment tracking software** between control vs concussed subjects for **concussion diagnosis**.

Teaching Assistant (Discrete Structures 1)
- Collaborated with the course instructor and **20+** other TA(s) to deliver an improved learning experience to **600+** students.
- Delivered weekly tutorial sessions to **40+** students, providing a review of important course content, an overview of different **proof techniques**, and a **live demonstration** of the problem-solving process.
- Provided individual feedback during **office hours** and on assessments, improving **mathematical** communication and **reasoning** skills.

Lendsqr   02/2021 — 11/2021
Machine Learning Engineering Intern
- Built a **traditional ML model** on customers' **lending data** to predict **loan repayment** with **90%** accuracy.
- Developed a **CNN**-based, human **selfie-powered model** with a **RESNET** and **VGGFace** pretrained models to predict customers' **loan repayment**.

ASAlytics (Now Nazari)   11/2021 — 06/2022
Founding Data Scientist
- Awarded a **$115k** grant in funding from the **Algorand Foundation** to build the ASAlytics platform.
- Handled all **data wrangling** experiments, **sentiment modelling**, and other **backend engineering** processes of ASAlytics, a **dynamic opinion mining** application to retrieve analytics for **digital assets** on the **Algorand blockchain**, through **real-time scraping** from **social media** platforms.

RESEARCH + PROJECTS

Social Bias Detection in Medical Research Data   04/2025
- Developed a neural network-based **fairness evaluation** tool that detects **bias** in **healthcare datasets**, comparing traditional models against neural network architectures through **Statistical Parity**, **Equal Opportunity** and **Demographic Disparity** metrics.

Unpaired Synthetic-to-Real Ultrasound Image Translation with CycleGAN   04/2025

- Developed an advanced **CycleGAN** framework for translating **artificial ultrasound images** to realistic scans, implementing quantitative evaluation metrics with **Fréchet Inception Distance (FID)** and **Structural Similarity Index Measure (SSIM)** that improved upon existing methods in the research landscape for medical **imaging** education.

Multilingual Speech Recognition for Clinical Note Taking   12/2024

- Built a **multilingual speech recognition** system using the **Whisper HuggingFace** model to transform **patient-clinician conversations** into structured **clinical notes** for improved healthcare documentation across **200+** different languages.

Tackling Online Harassment Through Allies   08/2021

- Built a classifier model with about **80%** accuracy to predict and **categorize harassment** from data filled out by harassment **victims** for further decision-making by ally organizations. This has helped eliminate physical and emotional stress in about **1000** women.

Elixir Cancer Diagnosis AI-Based System   08/2020

- Built a deep **convolutional neural network** model with **89%** accuracy and a **web app** that screens **microscopic images** to **detect cancer**, thus increasing speed and accuracy in cancer diagnosis and testing. Handed over to doctors in Tanzania's labs for tests and usage.

Wikimedia Data Dump   07/2020

- **Decompressed** and **extracted data** from **Wikipedia data dump**, **API pages**, and **Protection Pages**. Did statistical analysis and sophisticated visualizations to generate insights from the data. Moreover, aggregated ML algorithms were used to predict if a **protection type** could be **edited** or **moved**, with about **75%** accuracy.

SKILLS

SWE
Java, C, C++, JavaScript, React, TypeScript, Flask, FastAPI, PostgreSQL, MySQL, SQLite, GraphQL, Neo4J, Ruby on Rails, Kafka.

DS & ML
Pandas, Numpy, Matplotlib, Seaborn, Plotly, Tableau, PowerBI, Streamlit, OpenCV, Scikit-learn, Tensorflow, Keras, Pytorch.

EDUCATION

Carleton University 🔗   08/2022 – 08/2025 | Ottawa, Canada
Bachelor of Computer Science Honours, AI-ML Stream.
CourseWork: Data Structures & Alg, Machine Learning, Computer Vision, Unsupervised Learning, Convolutional & Recurrent Neural Networks, Reinforcement Learning, Attention, Autoencoders, Generative AI, AI in Surgery.
Honours: Clarence Gibson Scholar (2023). Dean's Honours List (2023). Paul Bregman Family Student Experience Award (2025).

FEATURES

| TEDx Talk 🔗 | | Carleton University 🔗 | | PiggyVest 🔗 | | Techsploration 🔗 |

AWARDS

Google Generation Scholarship (2022). Cadence Diversity in Tech Scholar (2023). Palantir Women In Tech Scholar (North America 2023). Grace Hopper Scholar (2023). Ms. Algorithm Award (Best Female Data Starlet in Nigeria 2020). Mentor of the Year, Global Ambassador & Global Speaker (Women Tech Network 2020). 3rd Place Winner at the Google Women Tech Maker Hackathon (2021). Canadian Leaders Under 40 (2025).