

# Joshua Ndala

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## PROFESSIONAL EXPERIENCE

### UBC For Learnification

Kelowna, BC

AI and Software Developer

May 2024 - Aug 2024

- Led ML development in a 5-person team to create an AI-powered assignment grading system, improving grading speeds by **75%** while maintaining data security.
- Implemented AI functionality using Microsoft's Phi-3 LLM through Ollama, enabling efficient and secure local processing of assignments.
- Designed and implemented SQL queries for efficient data retrieval from MySQL database, focusing on scalability for high-volume interactions.
- Conducted data-driven usability testing, resulting in a **20%** improvement in user satisfaction scores and a **30%** increase in overall satisfaction with AI grading accuracy.
- Utilized data analysis to guide UI improvements, leading to a **15%** increase in system status visibility and a **25%** improvement in error messaging clarity.

## PROJECT EXPERIENCE

### CoverForMe - AI Cover Letter Generator

Toronto

ML Engineer | Full-Stack Developer

Jan 2025 - Present

- Building an AI system using AWS Bedrock and LangChain that automatically generates personalized cover letters reduces writing time by **~80%** and improves application quality. Available to view on [GitHub](#).
- Creating a smart matching system using transformer models to analyze and compare job requirements with candidate experiences.
- Designing an efficient search system using vector storage to quickly find and match relevant skills between resumes and job descriptions.
- Developing a reliable data pipeline using PostgreSQL and AWS RDS, ensuring smooth handling of user data and secure storage of application materials.

### Smartphone Price Prediction Analysis

Toronto

ML Engineer, IBM Machine Learning Certificate

Oct 2024 - Oct 2024

- Designed and implemented end-to-end ML pipeline, achieving **96.5%** prediction accuracy through custom ETL processes and model optimization.
- Engineered robust data processing system handling 1,500+ entries, reducing feature extraction time by **40%** through optimized transformation algorithms.
- Implemented and compared multiple ML models (XGBoost, Random Forest, Linear Regression) with automated hyperparameter tuning, improving baseline accuracy by **4.5%**.
- Developed modular Python codebase with clean architecture principles, including automated testing and model performance monitoring. Available to view on [GitHub](#).

### Automated Fake News Detection On Social Media

Kelowna, BC

Researcher | Machine Learning Engineer, UBC

Jan 2024 - Apr 2024

- Analyzed and processed large datasets (43,000+ labeled examples) using Python libraries like Pandas for data cleaning, normalization, and feature extraction.
- Engineered data pipelines with TensorFlow, implementing LSTM, RNN, and BERT models achieving **99%** accuracy on news datasets and **50%** on tweets.
- Optimized BERT model, achieving **73%** accuracy on Bangladeshi tweets, demonstrating adaptability to diverse linguistic contexts.
- Conducted sentiment analysis on fake vs. real news, revealing nuanced insights into detection challenges.
- Published the final research paper on [GitHub](#), contributing to open-source research in fake news detection.

## EDUCATION

### University of British Columbia

Bachelor of Arts in Computer Science

## TECHNICAL SKILLS

**Machine Learning and AI:** IBM Machine Learning Professional Certificate (In Progress), TensorFlow, Scikit-Learn, Natural Language Processing

**Programming Languages:** Python, Java, R, JavaScript, SQL

**Data Analysis and Tools:** Pandas, NumPy, Matplotlib, Seaborn, Tableau, RStudio, Statistical Analysis

**Cloud & DevOps:** AWS, GCP, Git, Jupyter Notebooks, Google Colab, Docker

**Web Development:** React, Next.js, Express.js, Node.js, RESTful APIs, HTML/CSS