

# Prince A. Tuffour

## ML ENGINEER

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### PROFILE SUMMARY

An enthusiastic **Mathematics graduate** with a solid **machine learning and data analysis** foundation. My academic and project experience at Oregon State University, combined with technical proficiency in **Python, TensorFlow, and Keras**, equips me to tackle real-world machine-learning challenges. With a background in **teaching and software development**, I am well-prepared to contribute effectively in an entry-level machine learning engineer role.

### SKILLS

#### TECHNICAL SKILLS

Python | Javascript | MATLAB | SQL | R | C++ | C | TypeScript | Tensorflow | PyTorch | Keras | Scikit-Learn | Pandas | Matplotlib | Tableau | PowerBI | HTML | CSS | React | Bootstrap | jQuery | Node.js | Flask | Django | Express | FastAPI | PostgreSQL | MySQL | SQLite |

#### PROFESSIONAL SKILLS

Predictive Modeling | Data Visualization | Analytical Thinking | Software Development Life Cycle | Team Collaboration | Excellent Communication | Continuous Learning |

#### DEVELOPMENT PRACTICES & CONCEPTS

Docker | AWS | Google Cloud Platform | Agile methodologies | RESTful API Development | Git | Data Science | Statistical Analysis | Algorithm Development | Cross-functional Teamwork |

### PROJECTS

#### AUTOMATIC NUMBER PLATE RECOGNITION SYSTEM

Jan 2024

- Utilized Python, Yolov8, and EasyOCR for an advanced number plate recognition system.
- Focused on real-time detection and reading of vehicle plates with high accuracy.
- Engineered to perform under varied lighting and weather conditions, demonstrating adaptability and precision in computer vision.

#### MACHINE LEARNING WEB APP FOR SALARY PREDICTION

Jan 2024

- Developed using Python and Streamlit, creating an interactive web application.
- Implemented a machine learning model to predict software development salaries based on various inputs.
- Showcased the integration of machine learning models into user-friendly web interfaces, enhancing accessibility and practicality.

#### SALES FORECASTING AND DATA ENRICHMENT

Jan 2024

- Engaged in predictive analysis to forecast sales trends using machine learning models.
- Employed data enrichment strategies to refine and enhance the quality of sales data.
- Applied a combination of time series analysis and predictive modeling to accurately project future sales patterns.

#### ENHANCING FACIAL RECOGNITION: COMPARATIVE ANALYSIS OF IMAGE PREPROCESSING TECHNIQUES

Dec 2023

- Authored a research paper on the efficacy of PCA, KL Expansion, and SVD in preprocessing for facial recognition.
- Demonstrated an understanding of key machine learning techniques and their application to improve facial recognition systems.

#### GPU MEMORY PROFILER

Sept 2023

- Contributed to developing an open-source GPU Memory Profiler for TensorFlow and PyTorch.
- Involved in memory tracking, visualization tool creation, and profiling report generation, showcasing cross-functional collaboration and technical problem-solving.

### WORK EXPERIENCE

#### GRADUATE TEACHING ASSISTANT

Oregon State University | Corvallis, OR | Sept 2021 - Dec 2023

- Instructed over 230 students in Calculus, Algebra, and Differential Equations, and over 50 students in introductory programming, enhancing their understanding of complex data science concepts.
- Developed and refined classroom management and communication techniques, significantly improving student engagement and comprehension during programming classes.
- Provided individualized support, contributing to a noticeable increase in student mastery of challenging material, and improving course grades and feedback.

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**DATABASE MANAGEMENT SPECIALIST**

The AFEX Hub | Accra, Ghana | June 2016 - July 2021

- Led a team of 2 database administrators, overseeing critical database operations, and ensuring high availability and performance, resulting in enhanced data integrity and accessibility.
- Played a key role in software development initiatives, aligning with the company's IP strategies and contributing to the seamless integration of database management with business goals.
- Designed and implemented new database architectures, improving data models and schemas to support application releases and new development projects.
- Achieved over a 50% reduction in query run times through indexing improvements and normalization, enhancing system efficiency and user experience.

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**EDUCATION**

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**MS MATHEMATICS** | Oregon State University, Corvallis, OR

Sept 2021 - Dec 2023

Relevant Coursework: Programming and Data Structures, Linear Algebra, Applied Machine Learning, Probability, Numerical Analysis, Methods and Models of Applied Mathematics, Uncertainty Quantification, Quantum Computing

**BSC MATHEMATICS** | Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Sept 2016 - May 2020

Relevant Coursework: Discrete Mathematics, Scientific Computing, Optimization, Statistics, Introduction to Computer Programming, Regression Analysis, Probability, Calculus

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**ACHIEVEMENTS & VOLUNTEER EXPERIENCE**

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**BEST STUDENT, DEPARTMENT OF MATHEMATICS**

2020

Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

**VOLUNTEER EXPERIENCE**

2018

Software Developer | FLEEF Ghana, Accra, Ghana

**VOLUNTEER EXPERIENCE**

2017

Mentor | Innovate Ghana, Accra, Ghana

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**CERTIFICATIONS**

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**J.P. MORGAN SOFTWARE ENGINEERING VIRTUAL EXPERIENCE PROGRAM**

2023

Forage

**MACHINE LEARNING SPECIALIZATION**

2023

Coursera

**DEEP LEARNING SPECIALIZATION**

2023

Coursera