Tomisin Adeyemi

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Education

New York University New York, NY

BA in Computer & Data Science (Honors), Minor in Mathematics | GPA: 3.7 *Sep. '21 – May '25*

- **Relevant Coursework**: Data Structures, Basic Algorithms, Operating Systems, Multivariable Calculus, Linear Algebra, Probability & Statistics, Intro to Data Science, AI Research Seminar, Machine Learning, Natural Language Processing
- **Awards & Honors**: Presidential Honors Scholar (Top 10%), Davis Scholar ($30,000 scholarship)
- **Clubs & Affiliations**: Colorstack (Co-Founder & President, NYU Chapter), Rewriting the Code, NYU Women In Science, HackNYU, Codepath (Software Engineering)

Experience

Undergraduate Teaching Assistant Sep. '22 – Present

New York University *New York, NY*

- Provide in-class tutoring for **80+** students and hold office hours open to **600+** students, for the course **Introduction to Computer Programming (in Python)**.
- Created **supplemental lecture materials** using Google Colab notebooks, providing additional opportunities for students to reinforce programming skills.
- Helped students **build problem-solving skills** by breaking down complex programming problems into manageable steps and encouraging them to think critically about problem solving approaches.

Software Engineering Intern Jun. '23 – Aug. '23

Amazon *Seattle, WA*

- Enhanced **AWS Aurora GlobalDB API** architecture to incorporate recovery of misconfigured encrypted clusters into existing workflows, benefiting **30,000+ customers** in the most popular AWS Region.
- Demonstrated exceptional problem-solving skills by innovating a cross-functional solution that **surpassed initial engineering recommendations**, effectively **resolving multi-team issues**.
- Achieved stretch goal by developing an **automated recovery feature** that utilized initial architectural improvements to seamlessly recover clusters **without customer intervention**.
- Skills Used: Backend Development, Systems Design, Java, Object-Oriented Programming, UNIX CLI, Spring, AWS RDS, AWS KMS, & Git

Projects

Linguistic Features & Multi-label Emotion Classification | spaCy, NLTK, scikit-learn Apr. '23 – May '23

- **Led 4-member team** to write the code and paper for an **NLP research project** assessing the effectiveness of linguistic features for emotion classification.
- Preprocessed **50k-row** dataset, leveraging **TFIDF with unigrams** for feature extraction; additionally engineering custom textual features for model training.
- Trained and tuned logistic regression, SVM, KNN, Random Forest, and XGBoost models.
- Achieved **89.03%** Multilabel Accuracy and **58.91%** Micro-F1 score, outperforming baseline BERT model **by 8%**.

Miscellaneous Operating System Projects | C, C++, Git, Docker, gdb Jan. '23 – May '23

- Achieved grades of 90 to 100% in bi-weekly projects from my Operating Systems class, covering C programming, **Multi-Threaded Programming, File Systems, UNIX** and **Virtual Memory**.

Miscellaneous Machine Learning Projects | Python, Spyder, scikit-learn Jan. '23 – May '23

- Achieved grades of 100% or higher (with extra credit) on projects from my Machine Learning Class covering **Regression, Classification, Clustering, Dimension Reductions** & **Deep Learning** algorithms/techniques.
- Libraries used: pandas, numpy, scikit-learn, PyTorch, seaborn, matplotlib

Movie Recommendation System Kaggle Competition | scikit-surprise Jan. '23 – Apr. '23

- Led 4-member team to build movie recommendation system using **content-based filtering, collaborative filtering and matrix factorization** techniques.
- Collaborated to clean, preprocess, and merge 3 datasets totaling **60k rows**, utilizing duplicate identification and data imputation techniques to optimize model performance.
- Placed 4th out of 15 teams in NYC, with a Root Mean Squared Error of only **17.97%**.

Technical Skills

Languages: Python (pandas, NumPy, Matplotlib, scikit-learn, PyTorch), Java, C, C++ (familiar), HTML/CSS
Developer Tools: Git, Docker, UNIX, Regex