Kolade Alabi

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Education

The University of Texas Rio Grande Valley *Edinburg, TX*

Bachelor of Science in Computer Science, GPA: 3.8/4.0 *August 2022 - May 2023*

- **Coursework**: Data Structures and Algorithms, Software Engineering I, Deep Learning, Introduction to Data Science, Programming in Unix/Linux, Computer Science I/II, Object Oriented Programming in Python, Advanced Data Mining & Machine Learning, Automata Theory, Applied Statistics
- **Course Staff**: Teaching Assistant (Computer Science II)

Skills

Languages Python, C/C++, C#, JavaScript, R, Java, HTML/CSS

Developer Tools Git, Jira, VS Code, Jetbrains InteliJ, Visual Studio, SQLite, Slurm, Apache Jmeter, Jenkins, SonarQube, Singularity

Frameworks TensorFlow, Keras, Scikit-learn, Flask, Django, Spring Boot, React, .NET

Experience

JP Morgan Chase, Software Engineering Program *Houston, Tx*

Software Engineer *August 2023 - Present*

- Developing a .NET PowerPoint tool for automatically watermarking slides and providing copyright-free media, streamlining the process for creating business presentations securely
- Refactoring Apache Solr powered indexing to MongoDB native storing and AWS OpenSearch searching and indexing
- Migrating application to AWS, reducing local computing costs substantially

Capital One, Technology Internship Program *McLean, VA*

Software Engineering Intern *June 2023 - August 2023*

- Enabled Universal Deep Link servicing across all channels for partners like Walmart, Google Autofill, and Zelle
- Improved linking experience for 38,000,000+ users by improving ease of access to Enterprise Account Servicing Experiencing (EASE)
- Deployed a PostgreSQL database on Amazon Aurora, eliminating the use of a middleman service and reducing expenses by 19%
- Made use of Java Spring boot to generate and tokenize/detokenize refactored hyperlinks, following TDD throughout the process

Research

Carnegie Mellon University, Research Intern *Remote*

Deep Iterative Subtomogram Clustering Approach (DISCA) (Advisor: Dr. Xueying Zhan) *July 2023 - Present*

- Assisting student researchers and algorithm leads from various Universities to run DISCA models and methods, including the development of a Singularity container definition to allow researchers to install and run DISCA automatically
- Researching Deep Learning Cryo-Electron Tomography research papers to help develop DISCA methods further

The University of Texas Rio Grande Valley, Undergraduate Research Assistant *Edinburg, Tx*

Alzheimer's Detection Project (Advisor: Dr. Marziyeh Ayati) *August 2022 - May 2023*

- Discovered novel applications of Transfer Learning by analyzing and drawing conclusions from 5 research papers on its applications in medicine
- Held multiple meetings with University professors to plan research projects in preparation for a conference paper submission
- Researched optimal methodologies for predicting Alzheimer's in patients with blood samples

Professional Development

Google, Computer Science Research Mentorship Program *Remote*

CSRMP Mentee *February 2023 - May 2023*

- Selected to be a part of Google's Computer Science Research Mentorship Program (CSRMP)
- Received computing research mentorship from a Google researcher
- Matched in a pod with other students who have similar research interests (Natural Language Processing)

Google, Computer Science Summer Institute *Remote*

CSSI Scholar *July 2022 - August 2022*

- Participated in a 4-week intensive computer science summer program for incoming college students led by Google engineers
- Engineered 16 webpages using JavaScript, HTML/CSS, and Bulma including a collaborative final project presented to 30+people including Google Employees

Projects

Anime TrVAE | Python, TensorFlow, Keras, OpenCV, Pillow, Scanpy, Hugging Face, Slurm

- Implemented a Transfer Variational Autoencoder, with datasets from Hugging Face, Google Cartoon Set, and the CelebA dataset, for bidirectional image transfers across Anime, Cartoon, and Realistic classes
- Trained custom TensorFlow models on 150,000 images across 3 different classes in GPU Cluster environment with Slurm
- Presented my development process and results to a UTRGV reviewing panel for Senior Project, including a demonstration with new images on the spot, successfully displaying the robustness of the model

Soccalytics | Python, NLTK, Spacy, Plotly, Cohere, GPT 3, ScraperFC, Streamlit

- Collaborated with colleague to conceive of and Develop Soccalytics, a data visualization and NLP searching site for Soccer data
- Utilized the OpenAI GPT 3 API, as well as word embeddings from Cohere, to create a Named Entity Recognition based search engine on data scraped from FBref, extracting relevant results 95%+ of the time
- Developed custom Plotly spyder plots and various other charts on the Streamlit interface to visualize individual, team, and head-to-head player statistics and comparisons