

JALEEL DRONES-AKINS

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Education

University of Michigan, Ann Arbor

2023-2027

Bachelor of Art in Computer Science

- Relevant Coursework: Calc I, Python Programming, Programming Concepts in C++

Experience

Software Engineering Fellow | Headstarter AI

July 2024 - Present

Ann Arbor, MI

Javascript | ReactJS | NextJS | Firebase | AWS

- Led the frontend development of an AI-powered customer support application in a team of 3, utilizing NextJS, Vercel, and React to enhance user experience and streamline support processes
- Engineered 4 responsive web applications using ReactJS and NextJS, integrating Firebase for real-time data storage and authentication
- Applied advanced Git workflows and micro-service architectures learned from Amazon, Bloomberg, and Capital One engineers, avoiding deployment errors and improving code quality

Data Science Assistant | University of Chicago

May 2022 - August 2022

Chicago, IL

Python | PyTorch | Google Cloud

- Collaborated with a cross-functional team developing an AI-powered image recognition system capable of accurately identifying fish species with a success rate of 97%, improving efficiency and reducing manual identification errors
- Analyzed a dataset of over 1,000 fish images using Python and PyTorch, contributing to a project that addressed overfishing and restructured traceability in seafood supply chains.
- Deployed AI models on Google Cloud Platform, enabling scalable and efficient processing of large datasets in real-time.

Projects

Back-End Developer | VibeStream

October 2024

Music Streaming and Playlist Management System

Django | Spotify API | JavaScript | Python

- Integrated Django for robust server-side processing and efficient data management, handling over 100,000 music tracks and playlists with minimal latency.
- Implemented dynamic features including playlist fetching, search functionality, and detailed views for artists, albums, and tracks, enhancing user engagement.
- Integrated Spotify API for real-time music data retrieval, achieving an average response time of less than 200ms for API requests.

Front-End Developer | Item-Tracker

August 2024

Inventory management system

React | Firebase | JavaScript

- Integrated React for front-end development, streamlining user interaction and revamping system performance through modular component design
- Designed and implemented dynamic features including search, filtering, and pagination, enhancing scalability to handle over 1,000 inventory items
- Implemented Firebase for real-time database management and user authentication, reducing data sync errors and enhancing system security with 2-factor authentication

Data Analyst | Covid-19 Data visualization

May 2024

Data analysis & visualization

Python | Kepler.gl | Jupyter Notebooks

- Created interactive maps using Kepler.gl to visualize spatial distributions of COVID-19 impact across Chicago's ZIP codes
- Utilized GeoPandas and Pandas for data cleaning, transformation, and aggregation, improving data accuracy by 20%
- Processed and analyzed a GeoJSON dataset to calculate COVID-19 case and death rates per 1,000 residents, identifying high-risk areas within the city limits

Data Science Assistant | Remora Fishing Traceability

August 2022

Computer vision product enhancement

Python | Google Cloud Platform | PyTorch | Git

- Developed a multi-task learning model to simultaneously predict fish species, weight, and length, reducing the need for separate models and speeding up data processing by 30%
- Optimized model performance by applying custom composite loss functions, improving prediction accuracy for weight and length by 15%
- Curated and pre-processed a dataset of 1,491 fish images, ensuring balanced class distribution across training (76%), validation (19%), and testing (5%) sets to optimize model performance

Technical Skills

Languages: Python, HTML/CSS, C/C++, JavaScript

Development & Deployment Tools: Docker, Git, Visual Studio Code, Anaconda, Google Cloud Platform (GCP), AWS

Libraries/Frameworks: PyTorch, PyTorch Lightning, NextJS, ReactJS