

Diego Garcia

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EDUCATION

University of Missouri - Columbia

Columbia, MO

Bachelor of Science in Computer Science, Minor in Mathematics - GPA 3.5

August 2022 – May 2026

- **Relevant Coursework:** Cloud Computing, Big Data Analytics, Database Applications & Information Systems, Artificial Intelligence

EXPERIENCE

Undergraduate Research Assistant

May 2025 – August 2025

University of Missouri - Columbia

Columbia, MO

- Built and containerized 10+ DERMS microservices using Docker and Kubernetes, supporting scalable ingestion of real-time DER telemetry.
- Developed real-time streaming pipelines with Apache Kafka and ksqlDB, processing high-frequency DER data with low-latency transformations.
- Automated CI/CD workflows for ML and federated learning models, reducing deployment time and improving reproducibility across Kubernetes clusters.

PROJECTS

MLB Predictor | *Python, Pandas, Scikit-Learn, Matplotlib*

- Built a data pipeline with asyncio/aiohttp and Pandas to fetch and preprocess MLB Stats API data while avoiding data leakage.
- Used Matplotlib to visualize and validate cleaned data through diverse plots (distributions, box plots, trends), ensuring quality before model training.
- Trained and tuned Logistic Regression and Random Forest models using GridSearchCV, cross-validation, and hyperparameter optimization.
- Maintained a reproducible, version-controlled codebase with Git, highlighting skills in predictive analytics and statistical modeling.

Stock Predictor | *Python, Pandas, Scikit-Learn, Matplotlib*

- Collected and cleaned S&P 500 data from Yahoo Finance API for predictive modeling.
- Built and backtested models with expanding training windows, achieving 52.56% baseline accuracy.
- Engineered new features using rolling averages and momentum trends, improving accuracy to 57.42%.
- Visualized results with performance graphs to compare predictions against actual outcomes.

QuizMe | *MERN Stack (MongoDB, Express, React, Node.js), JavaScript, HTML/CSS*

- Developed a full-stack web application allowing users to create, take, and manage custom quizzes with real-time scoring.
- Implemented quiz history tracking with MongoDB, enabling users to review past performance.
- Integrated Recharts to visualize quiz results with interactive bar graphs for data-driven feedback.
- Built responsive UI with React and maintained modular, reusable backend APIs with Express and Node.js.

TECHNICAL SKILLS

Languages: Python, SQL, Java, C/C++, JavaScript, C#

Data & ML: Pandas, NumPy, Scikit-Learn, Matplotlib, Postgres, MySQL, Kafka, ksqlDB

Backend & Cloud: Docker, Kubernetes, AWS, GCP, Node.js, Express

Frontend: React, HTML/CSS, Recharts