# 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*

## EXPERIENCE

**Undergraduate Research Assistant**                                          May 2025 – August 2025
*University of Missouri - Columbia*                                                          *Columbia, MO*
- Built and containerized DERMS microservices with Docker, deploying multi-pod workloads on Kubernetes for scalability and reliability.
- Developed real-time data pipelines using Apache Kafka and ksqlDB to stream and transform DER telemetry.
- Implemented secure data-sharing solutions with MinIO object storage for compliant exchange of DER datasets.
- Automated deployment and monitoring of ML and federated learning models on Kubernetes with CI/CD workflows.

## PROJECTS

**MLB Predictor** | *Python, Pandas, Scikit-Learn, Matplotlib*                                          June 2025
- 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*                                          July 2025
- 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*                                          April 2025
- 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

**Languages**: Java, Python, C/C++, C#, SQL (Postgres, MySQL), JavaScript, HTML/CSS
**Frameworks**: React, Node.js, Express.js, MERN Stack, Apache Kafka, ksqlDB
**Developer Tools**: Git, Docker, Kubernetes, Google Cloud Platform, AWS, VS Code, Visual Studio, IntelliJ
**Libraries**: Pandas, NumPy, Matplotlib, Scikit-Learn, Recharts, asyncio/aiohttp