

Justin Morgan

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Education

University Of Central Arkansas

Bachelor of Science in Computer Science

Conway, AR

Aug 2022 – Dec 2025

Certification

Amazon Web Services

AWS Certified Cloud Practitioner

Jun 2024 – Jun 2027

Experience

Database & Integrations Engineer Intern

The Interpublic Group of Companies

July 2024 – Present

Conway, AR

- Developed and optimized Python and Lambda code, enabling dynamic query execution and automation of data processing tasks, resulting in streamlined data management and efficient report generation.
- Collaborated in the development of a company-wide AWS project which utilized Python, Lambda, S3, and multiple other AWS services to automate DataZone and Redshift population, enabling stakeholders and business owners' access to real-time data for critical reporting process.
- Created and maintained technical and business SQL rules within AWS Athena, validating and transforming incoming data to ensure accuracy and consistency for report purposes.

Database & Integrations Engineer Intern

Axiom LLC

Jan 2023 – July 2024

Conway, AR

- Developed SQL queries and procedures to enhance data extraction, transformation, and reporting, significantly reducing processing time.
- Collaborated with cross-functional teams in Agile environments, participating in sprint planning, stand-ups, and retrospectives to ensure timely delivery of database solutions aligned with business goals.
- Leveraged IPaaS systems for building and managing data pipelines which ensure seamless integration between cloud and on-premises environments, optimizing data flow across the organization.

Projects

CNN Image Classification | Python, PyTorch

Dec 2023 – Jan 2024

- Custom CNN architecture in PyTorch, including multiple convolutional layers, batch normalization, and pooling layers
- Conducts thorough performance evaluation, including precision, recall, F1-score, and class-specific accuracy metrics. Visualizes results using confusion matrices and heatmaps for detailed error analysis.
- Developed custom utilities for real-time monitoring of training progress, including loss tracking and periodic accuracy assessments during training.
- Utilizes GPU acceleration, dynamic learning rate adjustment, and Adam optimizer.

The BrookeShelf | Vite, React, TypeScript, AWS, Lambda, Python, SQL

May 2024 – Jun 2024

- Created and deployed a web application for managing and browsing book collections utilizing Vite, React, and TypeScript for the front-end, hosted on AWS.
- Managed a MySQL database for storing and retrieving book information, ensuring data integrity and fast access for end-users.
- Utilized AWS services, including S3 for static site hosting, CloudFront for efficient content delivery, and Route 53 for domain management, which ensured a robust and scalable application.
- Developed and deployed AWS Lambda functions to handle backend operations, including data management and communication between the front-end and a MySQL database.

Technical Skills

Languages: Python, TypeScript, SQL, JSON, C++

Frameworks: React, PyTorch, Scikit-learn, TensorFlow, Vite

Developer Tools: Git, GitHub, Amazon Web Services, VS Code, Visual Studio, IntelliJ, MSSQL

Libraries: pandas, NumPy, Matplotlib, torchvision, seaborn, scikit-learn,