Aryan Miriyala

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EDUCATION

Bowling Green State University — Bowling Green, OH
*Master of Science in Computer Science, **GPA: 4.00/4.00*** — *Aug. 2024 – May 2026*

Bowling Green State University — Bowling Green, OH
*Bachelor of Science in Computer Science, **GPA: 4.00/4.00*** — *Jan. 2021 – Apr. 2024*

EXPERIENCE

Data Engineering Intern — May 2025 – Aug. 2025
American Association of Insurance Services — *Lisle, IL*
- Automated a 100% manual SQL billing script by developing a **PySpark** job and weekly **AWS Glue Workflow**, processing **20+ TB** of **Impala** data to calculate charges for **700+ member companies**.
- Architected the 160+ table migration by profiling **Oracle/Impala** (via **JDBC**) with **Python (Pandas)** and **SQL** to map **data similarities** and define a **single data taxonomy** of **25 MDM domains**.
- Replaced **160+ Pentaho jobs** with an automated **AWS Glue Workflow**, using the new **MDM domains** and an **AWS Glue pipeline** to ETL data into **S3** (partitioned) for **Semarchy MDM**.
- Orchestrated the daily **AWS Glue Workflows** to **enable a new self-service application**, which eliminated manual entry and ensured a **24-hour data latency** for all new MDM domains.
- Built a **reverse-ETL** pipeline in **AWS Glue** for the **MDM data**, enabling **accurate data integrity checks**.

Software Engineering Intern — May 2023 – May 2024
American Association of Insurance Services — *Lisle, IL*
- Engineered the **foundational data model** for **openIDL** (unified view for insurance data), using **Python** to parse taxonomies and implement **1,000s of SQL tables** on **Oracle/PostgreSQL** across **10+ insurance lines**.
- Developed a high-performance **Python** script using **multiprocessing** and **Pandas** to clean and parallel-process massive CSVs, implementing **fuzzy de-duplication** and **data hashing** for 100% data compliance.
- Contributed to a full-stack **React** modernization by implementing **Role-Based Access Control (RBAC)** and **JWT authentication** with **Node.js** to deliver a secure, role-specific landing page for 100+ internal users.
- Automated a 2-person validation process by building a **scheduled AWS Lambda** function that polled database tables, **tokenized PII using hashlib/boto3**, and ingested clean **JSON** into S3.

Software Engineering Intern — May 2022 – Aug. 2022
Alliance for Paired Kidney Donation — *Toledo, OH*
- Ensured **HIPAA compliance** by implementing site-wide **anti-CSRF tokens** for user authentication and protection of patient data.
- Built a **JS/Bootstrap** module to log blood sample data, ensuring data completeness for the matching algorithm.
- Redesigned the responsive **"Match Run"** results page with **Bootstrap** to improve readability of donor chains.
- Reduced page render times by refactoring legacy **JavaScript** for **asynchronous ('async'/'defer')** loading.

PROJECTS

Travel Health Advisor | *React, Node.js (Express), MongoDB, Mistral AI, TailwindCSS* — [Apr. 2025]
- Developed a full-stack health app using **React**, **TailwindCSS**, and **Express.js** to provide personalized travel health advisories (e.g., disease risk, precautions) based on user health data and destination.
- Engineered a **RAG** pipeline using **Mistral AI** and **HuggingFace** models to vectorize and query a massive **MongoDB** health database via **cosine similarity search**, powering all personalized insights.
- Built a **Mistral AI** chatbot that leveraged the **RAG** model for conversational insights and generated a dynamic, downloadable travel checklist based on the user's specific health profile.

RocketGrades | *Angular, Node.js, Mistral AI, MongoDB, AWS S3, Auth0, TailwindCSS* — Mar. 2025
- Developed a full-stack LMS web app featuring a **Mistral AI** agent (via **LangChain**) to provide instant, automated assignment feedback, significantly reducing grading time.
- Engineered a secure, scalable backend using **Node.js**, with **Auth0** for role-based access control, **MongoDB Atlas** for data persistence, and **AWS S3** for file storage.

TECHNICAL SKILLS

Languages: Python, SQL, JavaScript/TypeScript, C++/C, C#, PHP
Data Engineering: AWS (Glue, S3, Lambda), Spark (PySpark), Impala, Hadoop (HDFS, MapReduce), Semarchy xDM
Web & Frameworks: React, Angular, Node.js (Express), Pandas, NumPy, LangChain, TensorFlow, PyTorch, TailwindCSS
Databases & Tools: PostgreSQL, Oracle, MongoDB, MySQL, Git, Docker