Jax Riddell

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EDUCATION

Lamar University — Beaumont, TX
Bachelor of Science in Computer Science — *May 2026*
- *Relevant Coursework: Data Structures and Algorithms, Software Engineering, Operating Systems, Computer Architecture, Cybersecurity: Systems, Cybersecurity: Networks UNIX C++, Discrete Structures*

Port Neches-Groves High School — Port Neches, TX
High School Diploma — *May 2022*

TECHNICAL SKILLS

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

Frameworks & Libraries: React, Node.js, Next.js, scikit-learn

Tools & Platforms: Git, VS Code, AWS, Sanity, Vercel

EXPERIENCE

AI/ML Spectral Modeling Research — July 2025 – Present
Lamar University - Computer Science Department — *Beaumont, TX*
- Selected for a competitive, year-long AI/ML research assistantship focused on modeling noisy GQD spectral data to predict chromophore structures.
- Research project integrates cyber twin protocols, TD-PiFCI+DFT spectral computation, and quantum modeling to enhance spectral prediction accuracy under real-world noise conditions.
- contributed to data preprocessing, anomaly detection, and building predictive models using scikit-learn, Gaussian Process Regression, and Random Forests.
- Participated in collaborative coding, weekly planning, and scientific documentation using tools like Python, NumPy, Pandas, and Matplotlib.

PROJECTS

ClaimLens - AI Fact-Checking Web App | Live Site | *Next.js, React, Tailwind CSS, Node.js, OpenAI API*
- Created an AI-powered solution to combat misinformation by providing fact-checking with detailed reasoning.
- Integrated OpenAI GPT-4o-mini API to analyze claims with 85-95% accuracy on factual claims.
- Implemented RESTful API architecture using Next.js serverless functions for scalable backend processing.
- Utilized intelligent pattern matching algorithms that cross-reference user claims against scientific knowledge bases and misinformation databases
- Deployed to Vercel with automated CI/CD pipeline and environment variable management.

Disney+ Clone | Live Site | *Next.js, Tailwind CSS, Vercel*
- Developed a Disney+ Clone web application using React.js, replicating the user interface and functionality of the original platform with a focus on displaying movies and shows using data from TMDb API.
- Replicated key features like video previews and search functionality, enhancing UX.
- Deployed on Vercel for fast and reliable hosting, utilizing TMDb API to fetch real-time movie data, enabling users to explore trending and upcoming movies and TV shows.

Cache Simulator | GitHub | *C++*
- Simulated memory access patterns, improving performance evaluation by 15%.
- Allowed for user-defined settings such as cache size, block size, associativity, and replacement policies.
- Provided insights into memory access patterns by calculating hit and miss rates percentages for various workloads.
- Demonstrated the impact of cache design decisions on system performance through detailed analysis and experimentation.