Tristan Johnston

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Education

University of Alabama at Birmingham — Birmingham, AL
Bachelor of Arts in Computer Science, Minor in History — *Aug. 2019 – Dec. 2023*

Experience

Full-Stack Software Engineer — Client Project — Nov 2024 – Apr 2025
A Pet's Day Out — *Birmingham, AL*

- Designed and implemented a full-stack internal dashboard for customer, pet, and appointment management using PostgreSQL, Express, React, and Node.js
- Developed secure, session-based authentication with Passport.js, supporting both local strategy and Google OAuth
- Modeled relational data structures to support detailed tracking of multi-pet, multi-owner households and visit records
- Built a responsive, mobile-first UI optimized for daily use by non-technical staff
- Integrated AWS S3 for efficient, scalable photo uploads and retrieval

Technical Skills

Languages: Python, Java, JavaScript, SQL
Frameworks: React, Node.js, Express, Flask
Styling/UI: Chakra UI, Shadcn UI
IDEs: VS Code, Eclipse, Visual Studio
Databases: PostgreSQL, MongoDB
Testing/CI: JUnit, TravisCI
Tools: Git, Docker, AWS S3

Projects

Parcel Data Visualization | *Next.js, React, PostGIS, Docker* — May 2025 – July 2025

- Built a full-stack web app to visualize parcel-level value-per-acre data using 3D extrusion and dynamic color interpolation
- Rendered GeoJSON data with Deck.gl and MapLibre for interactive, high-performance maps
- Deployed a Dockerized PostGIS database to serve spatial data with efficient geospatial queries
- Implemented view state clamping and custom styling to focus user attention and improve UX
- Used Next.js API routes and server-side rendering to improve performance and maintainability

DocDock (WIP) | *Next.js, LangChain, Supabase* — June 2025 – Present

- Prototyping a self-hostable document viewer with AI-assisted querying over uploaded PDFs
- Exploring semantic chunking, embedding-based search, and retrieval-augmented generation (RAG)