

Cole Plagens

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EDUCATION

University of Houston

Houston, TX

Bachelor of Science in Computer Science, Minor in Mathematics, GPA: 3.6

Dec. 2025

- Relevant Coursework: Database Systems, Data Structures and Algorithms, Data Science I, Data Science and Statistical Learning, Software Design
- Dean's List Fall 2023 - Fall 2025

PROJECTS

Startup Operations Platform

Jan. 2025 – Present

- Designed and deployed a multi-tenant SaaS platform using React (TypeScript) and ASP.NET Core, implementing JWT authentication, role-based access control, tenant-isolated PostgreSQL data modeling, subscription-tier enforcement, and background job processing to simulate production-grade B2B workflows.
- Containerized and deployed the system using Docker and AWS, integrating S3 for secure file storage and configuring a GitHub Actions CI/CD pipeline to automate testing, image builds, and cloud deployment, with the frontend hosted on Vercel.

Volunteer Activity Application

Sept. 2025 – Nov. 2025

- Built a full-stack volunteer management application using the PERN stack, enabling secure user authentication, role-based access for admins and volunteers, and full event lifecycle management
- Implemented an automated volunteer-event matching system based on user profiles, skills, and availability, with notifications and participation tracking to streamline coordination and improve engagement, all powered by Supabase

Theme Park Management System

Jan. 2025 – Apr. 2025

- Developed a full-stack Theme Park Management System using React and ASP.NET, implementing role-based authentication (Visitor, Staff, Admin) to support ticket purchasing, ride and shop browsing, and user profile management
- Designed and implemented a MySQL relational database with complex queries and trigger-based constraints to enforce data integrity for ride status, maintenance workflows, and featured attractions
- Built responsive admin and staff dashboards in React with full CRUD functionality and analytical reporting for revenue, ticket sales, maintenance costs, ride breakdowns, and popularity metrics over configurable time ranges
- Deployed the application using Azure for backend services and database hosting, with the frontend hosted on Vercel for scalable production delivery

EXPERIENCE

CougarCS Tutor

Sept. 2025 – Dec. 2025

University of Houston

Houston, TX

- Collaborated with students and other tutors in the department to provide valuable help to students needing assistance with their programming assignments and examination preparation
- Troubleshooted student programs through rigorous C/C++ programming assignments requiring challenging implementations of course content

Crew Member

July 2022 – Aug. 2023; May 2025 – Present

Firehouse Subs

Houston, TX

- Provided excellent customer service in a fast-paced, team-oriented environment
- Upheld franchise best practices and protocols for food handling safety and efficiency

TECHNICAL SKILLS

Languages: Python, C/C++, SQL (PostgreSQL, MySQL), JavaScript, Typescript, C#, HTML/CSS, R

Frameworks, Libraries and Runtimes: React, Node.js, Express, ASP.NET, Next.js

Developer Tools: Git, GitHub, Docker, Supabase, VS Code, Tailwind CSS, AWS, Azure

Data Science / ML: Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, Jupyter Notebook, TensorFlow, PyTorch