MAX HARTFIELD

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EDUCATION

The University of Texas at Austin   Bachelor of Science, Computer Science   Dec 2025
Minor: Statistics and Data Science

Overall GPA: 3.97/4.00

Related Coursework: Data Structures and Algorithms, Operating Systems, Software Engineering, Algorithms and Complexity, Object-Oriented Programming, Artificial Intelligence, Machine Learning

EXPERIENCE

Cox Automotive - *Software Engineer Intern;* Austin   May 2024 - August 2024
- Collaborated with a team of developers and utilized agile software development to deliver meaningful changes to production
- Developed and thoroughly tested with Stencil.js and .NET to create a new endpoint and render a web component through a CDN
- Created GitHub Actions workflows to automate setup of staging environments for frontend and backend applications
- Utilized Terraform to generate the AWS resources necessary to create a dedicated CloudFront CDN for the frontend
- Integrated an enterprise wide design system based on Tailwind to restyle web components and make future development easier
- Implemented a chrome extension that programmatically scrapes a user's page and uses AI to evaluate a feature and its user stories

ACADEMIC PROJECTS

Texas Trauma Support Website   Spring 2024
- Collaborated with 4 colleagues to build a dynamic React.js website hosted on AWS Amplify to aid trauma survivors
- Programmatically scraped data from 3 data sources using Puppeteer and populated the data into a SQL database
- Implemented an API for the frontend to seamlessly retrieve the data for over 3550 instances of support resources from the backend
- Utilized RESTful APIs like Google Maps and Yelp to display locations and reviews for trauma facilities
- Created unit tests in both the frontend and backend and incorporated Continuous Integration with GitLab Pipelines
- Wrote a technical report on the technologies used and how to build and deploy the website to facilitate future development

Easy Cook   Spring 2024
- Created a mobile app to help users track calories and generate recipes given ingredients or a specified meal/cuisine
- Programmed in Dart and utilized Flutter and OpenAI API to make a unique and flexible experience for both IOS and Android users

Chess Website maxhartfield.github.io/Chess-Website   Summer 2023
- Built a static website where two people can play chess on the same device using HTML, JavaScript, and CSS
- Implemented the complex game mechanics in chess like piece movement, castling, stalemate, promotion, etc.
- Created a user friendly design by outlining possible moves, highlighting last move, and coloring the king red when in check
- Integrated an undo feature and a custom board editor, allowing users to play from any desired position or configuration.

Pintos   Fall 2023
- Modified Pintos operating system to strengthen threads, user programs, virtual memory, and file systems using C
- Adjusted threads to handle priority scheduling and priority donation through the use of locks, semaphores, and monitors
- Implemented argument passing and 18 system calls for user programs to call upon like exec, read, write, wait, etc.
- Developed virtual memory with paging and strengthened file system to handle indexed and extensible files and subdirectories

chArm-v2 System Emulator   Spring 2023
- Implemented a pipeline with cache simulator for a subset of the Arm A64 instruction set to handle 25 instructions using C
- Developed the stages of instruction execution - Fetch, Decode, Execute, Memory, and Writeback - and handled data/control hazards

HONORS
- Eagle Scout – Boy Scouts of America   2022
- USA Men's Gymnastics National Qualifier   2022

SKILLS
- **Computer Programming**: Python, Java, C, C++, C#, JavaScript, TypeScript, HTML, CSS, SQL, Terraform, YAML, Assembly, React.js, Stencil.js, .NET, Flask, Dart, Flutter
- **Tools**: AWS, Docker, Postman, Swagger, Git, Github Actions, GitLab Pipelines, CI/CD, Visual Studio Code, Bootstrap, Tailwind, Puppeteer, MSTest, Jest, Selenium, Scrum Agile Development, Jupyter Notebook, Matplotlib, Pandas