JERRY HE

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SUMMARY

Third-year undergraduate with over 6 years of system architecture, mobile application, and full stack web development experience in collaborative and solo environments. Proficient in designing and implementing interactive systems with robust and scalable infrastructure. Seeking to leverage my technical expertise in a challenging and dynamic environment.

SKILLS

Java, C, Python | Javascript, HTML, CSS, Full Stack, React, Bootstrap, NoSQL (Firebase) | Flutter, Kotlin, Android

EDUCATION

The University of Texas at Austin [Austin, TX] Aug 2022 - May 2026
Bachelor of Science in Computer Science, Minor in Robotics

- GPA: 4.0, Distinguished College Scholar
- Relevant Coursework: Algorithms, OS, Computer Architecture, Linear Algebra, Data Structures, Discrete Math
- Ongoing Coursework: Software Engineering, Principles of Machine Learning, Gateway to Robotics

Human-Computer Interaction Lab [Austin, TX] Aug 2024 - Present
HCI Independent Researcher

- Researching how the position of mouse sensors relative to participants' pointer fingers affects 3D aiming abilities

C S 313E Elements Of Software Design [Austin, TX] Aug 2024 - Present
Undergraduate Course Assistant

- Developed project requirements and coding tutorials to enhance students' programming skills
- Designed rubrics and provided timely, constructive feedback to guide students in understanding data structures
- Led sessions to address misunderstandings and coding issues, ensuring student progress and comprehension

EXTRACURRICULAR

Engineering and Computational Learning of Artificial Intelligence in Robotics Jan 2024 - Present
Autonomous Vehicle Engineer (Ongoing Project)

- Developing a small-scale autonomous vehicle capable of navigating a track and adapting to human instructions
- Designed CAD models using Fusion 360 and produced parts using 3D FDM printing for rapid prototyping
- Programmed a control system with Raspberry Pi and Python, enabling remote operation and live video streaming
- Implementing computer vision with a bifocal camera and integrating natural language processing for instructions

PROJECTS

PintOS Implementation

- Developed and enhanced functionalities in the PintOS operating system as part of an operating systems course
- Collaborated with a team of four to design and implement optimal solutions, ensuring a unified understanding of objectives and seamless integration of system components
- Implemented critical system features, including system calls, process scheduling algorithms, thread synchronization mechanisms, deadlock avoidance, virtual memory management, and file system operations

ARM System Emulator

- Designed and implemented an ARM simulator for a custom ISA in C as part of a computer architecture course
- Demonstrated strong pair programming techniques and a deep understanding of computer architecture principles
- Successfully integrated an instruction pipeline with signal/hazard control and a two-level memory hierarchy

Sertinary Application

- Developed a cross-platform app using Flutter and Firebase to help users achieve their health and fitness goals
- Achieved seamless integration of backend services with an intuitive, user-friendly interface
- Implemented features such as a food intake tracker, nutritional information display, real-time custom recipe sharing, and persistent alarms