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 | 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, Machine Learning, Gateway to Robotics,

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

- Researching the use of AI to help blind & low-vision users better navigate modern technology

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

- Constructed project requirements and coding tutorials to enhance students' programming skills
- Delivered timely and constructive feedback, guiding students' comprehension of complex data structures
- Held sessions to correct misunderstandings and explain coding issues, ensuring clarity and coursework progress

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 fast 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 incorporating natural language processing 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 the seamless integration of system components
- Developed critical system features, including system calls, process scheduling algorithms, thread synchronization mechanisms, deadlock avoidance paradigms, virtual memory management, and file system operations

ARM System Emulator

- Designed and implemented an ARM simulator for the chArm-v2 ISA in C, as part of a comp. 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 Flutter & Firebase app to support users in achieving their health and fitness goals
- Achieved seamless integration of backend services with an intuitive, user-friendly interface
- Implemented functionalities including persistent alarms, food intake tracking, nutritional information display, and the real-time creation and sharing of custom meal recipes