

Gurpreet Singh

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EDUCATION

College of Natural Science and Mathematics, University of Houston, Houston, Texas

Bachelor of Science in Computer Science

Spring 2025

Cumulative GPA: 3.5

WORK EXPERIENCE

NASA Sponsored Undergraduate Student Instrument Project

Spring 2023 – Spring 2025

Software Team Lead & Power Team Member

- Managed a team of 14 software designers to create a payload circuit using Raspberry Pi's, Arduinos, API Libraries
- Streamlined team focus by assessing objectives and recording progress during weekly team meetings
- Operated soldering and breadboard equipment to design 2 circuit boards for signal transmission of data
- Presented systems and sciences progress to managers and team leads weekly through documented presentation
- Calculated system power requirement and determined efficient power supply source for payloads resulting in a decrease budget expense of 300\$

USIP Nationwide Eclipse Ballooning Project

Spring 2023 – Spring 2025

System Debugger

- Created functioning balloon payload with 4 team members by developing and redesigning circuits
- Debugged camera systems allowing NASA servers to receive team data and video footage for broadcasting
- Developed and modified Pterodactyl flight computer and Pterodactyl GPS tracker to transmit balloon location
- Tested cut-off command for safe release of payload resulting in a 70% decrease of equipment damage
- Orchestrated construction of ground tracking systems resulting in functioning satellite communication

PROJECTS / EXPERIENCE

Personal Portfolio Website

Spring 2024

- Developed a responsive personal portfolio utilizing HTML and CSS to showcase projects and experiences.
- Curated design detail to incorporate visual transitions and transformations withing webpage using CSS
- Implemented a media device detector in JavaScript for optimal presentation across various screen sizes.
- Created interactive elements with JavaScript, including dynamic links and images, enhancing user engagement.
- Programmed a custom script for seamless communication between spreadsheet data and the webpage backend.

CodeRed Odyssey Hackathon

Fall 2022

- Led a team of 4 in development of consumer optimized web application designed for ecommerce within 24 hours
- Programmed shopping cart and checkout interface to curate ecommerce website functionality using ReactJS
- Designed the web application's front-end format and structure for access to back end programs using NodeJS
- Collaborated with team by pushing and pulling developed code using Git to maximize process efficiency
- Created and presented PowerPoint deck to showcase web application's ecommerce functionality of 90% accuracy

HONORS AND AWARDS

Cy-Fair Education Foundation Scholarship: Spring 2021, Fall 2022

Dean's List: Fall 2022

ACTIVITIES

CougarCS Organization

Fall 2022 – Present

- Constructed front-end web applications using HTML and CSS to develop site functionality
- Advised organization during monthly C++ tutor sessions and bi-monthly test prep courses

SKILLS

Fluent in English and Punjabi, Conversational in Spanish

Proficient in Visual Studio Code, Visual Studio, and CLion

Proficient in Java and C++, Familiar in Python, HTML, CSS, JavaScript, React, Arduino and Git