Arjun Chati

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OBJECTIVE: Undergraduate in Electrical & Computer Engineering looking for an internship for Summer 2025.

EDUCATION

The University of Texas at Austin - Cockrell School of Engineering   **May 2027**
Bachelor's in Electrical & Computer Engineering (Major GPA: 3.9)
Relevant Coursework: Circuit Theory, Embedded Systems, Multivariable Calculus, Linear Algebra & Differential Equations, Engineering Physics 2 & Quantum Theory, Design with AI

WORK/PROFESSIONAL EXPERIENCE

Hardware Research and Design Team Lead – *Texas Aerial Robotics,* Austin. TX   **September 2024 – Present**
- Worked on custom power distribution PCBS and BEC layouts using **Altium Designer** tools and **LTSpice** simulations
- Designed 20+ unique drone assemblies with **Fusion** and **SolidWorks**, utilizing 3D printed Carbon Fiber Nylon
- Coordinated systems integration using the **NVIDIA Jetson Nano** on a custom designed UAV platform for autonomy

Firmware Design Team Member– *IEEE Robotics and Automation Society*; Austin, TX   **September 2024– Present**
- Implemented a Subsystem Amputation failsafe for the UT **DJI Robomaster Robotics Competition** team
- Worked with **Git**, **GitHub, Linux,** and VM container applications across a large-scale software product cycle
- Appended UAV C++ libraries to improve the pilot-side HUD interface and relay subsystem diagnostic data

Sales Associate - *Campus Computer Store*; Austin, TX   **August 2024 – Present**
- Participated in the **Apple SEED** product excellence program for enhanced Apple Sales and product knowledge
- Researched current advances in consumer technology and how they applied to a growing student body
- Ran consumer facing technical service and support for various departments and individual students

STEM Teaching Intern – *NIHF Camp Invention*; Prosper, TX   **May 2021 – August 2024**
- Led students ages 6-10 through STEM courses developed by the **Army Educational Outreach Program**
- Instructed classes of 20+ elementary students of diverse backgrounds and special educational needs
- Worked on 30+ child-oriented modules covering hobby electronics, ecological systems, and basic robotics

Prosper Marching Band - *Drum Major*; Prosper, TX   **May 2020 – May 2024**
- Coordinated a collaborative team of Drum Majors and developed seasonal schedules/objectives for large ensembles
- Maintained networks of connection between over 300 students, directors, and sponsors as a universal representative
- Conducted and Performed at the State and National level with near consistent finalist placements and honors annually

Project Experience

Aerial Robotics and Design Projects
- Designed and built an autonomous medical delivery drone for the **Raytheon Autonomous Vehicle Competition**
- Partnered with **Lift Aircraft** to design custom landing gear for an autonomous paramedic response carrier system
- Personally led CAD layout design of a crash-proof testing quadcopters and a projectile based combat drone
- Tested models in FEA simulation for thermal, structural, and aerodynamic responses to conditional stress scenarios

Equalizer VST Plugin (via Projucer)
- Developed a free equalizer plugin compatible with all major Digital Audio Workstations on Mac and Windows
- Implemented frequency filtration, transposition, and modulation using C++ for digital signal processing
- Utilized **Figma** to design an intuitive and coherent UI for the client-side interface of the application file

Mixed Signal Analog Filter Design
- Implemented a DAC/ADC in C/ARM using the TI MSPMO ARM-M0+ to compress .wav files through mono-speakers
- Tested and Designed RLC signal filters with MOSFETS using LTSpice simulation for personal anti-aliasing in audio
- Utilized these custom filter circuits in MIDI music production workflows as alternatives to traditional digital plugins

SKILLS

Softwares: Microsoft 365, Autodesk Fusion, Altium Designer, KiCad, SolidWorks, Waveform 13, Projucer

Languages: Python, C, C++, Java, HTML/CSS/JS, ARM-0

Soft Skills: Project Leadership, Collaborative Environments, Instructional STEM, Product Development

Certifications: Databricks for Data Engineering, IBM AI Product Manager