

Abhilash Sunkara

CPEN Freshman @ TAMU | abhilash.sunkara@tamu.edu | www.abhilash-sunkara.dev | github.com/abhilash-sunkara

Skills

CAD: Fusion 360, PTC Onshape

Programming: Java, Kotlin, Typescript, Rust, Python, C++

Manufacturing: 3D Printing and Slicing, CAM with Fusion 360

Experience

Sensei/Tutor, CodeNinjas

November 2022 – March 2025

- Used a curriculum based around game development to teach kids about programming fundamentals (variables, events, conditionals, loops, functions, and classes)
- Taught multiple different programming languages (block coding, Javascript, C#)
- Engaged children to keep them focused on learning and practicing coding fundamentals

Hardware Co-Lead & Assistant Project Manager, FTC Robotics

November 2021 – May 2025

- Served as hardware lead and assistant project manager for 4 years
 - FTC teams 6990, 21438 and 26847
- Designed, manufactured and tested robot designs for competition
- Used Onshape for creating robot designs
- Created timelines and facilitated communication for entire team
- Advanced to state championship in 2023, regional championship in 2024 and 2025

Science Fair Participant, GARSEF

November 2021 – May 2025

- Competed in GARSEF for 3 years, 2022 and 2024-2025 in embedded systems category
- Worked with a Raspberry Pi Microcontroller to collect and process data
- Used analog output and input with moisture and EMG sensors
- Integrated vision processing with OpenCV and tensorflow

Projects

FTC Tracker

github.com/KrishPatelShah/FTC-Tracker

- Created a mobile app to make scouting FTC teams easier
- Programmed app using Typescript and React Native/Expo as the framework
- Used a GraphQL API to pull team data and a Firebase database to store user data
- Published in Google Play Store with 1000+ downloads

GigaHertz

github.com/abhilash-sunkara/gigahertz

- Created a Tauri desktop application to allow for local song and audio playback
- Designed frontend using Typescript and React framework with TailwindCSS
- Used Rust for an audio playback backend system using the Rodio crate

Typing Test CLI

github.com/abhilash-sunkara/typing_test_cpp

- Created a CLI tool to run typing tests using C++
- Used CLI11 and httplib to architect functionality and fetch words/quotes from API's

Rust Weather TUI App

github.com/abhilash-sunkara/rust_weather_app

- Created a TUI app with Rust and Ratatui
- Used a REST API and asynchronous code modules to pull weather data from weather.gov
- Used Ratatui to collect user input from text input and display data as a graph