Rohin Sood

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Education

Del Norte High School (2021-Present), San Diego

- Weighted Cumulative GPA: 4.33/4.00
- AP Courses: Computer Science Principles (5), Music Theory (5), Chemistry, Biology, Calculus AB, Computer Science A

Awards

- 2023 FRC Regional Finalists
- 2023 FRC Regional Impact Award Winner
- 2022 FRC Regional Chairman's Award Winner
- 2022 FRC Regional Engineering Inspiration
- 2020 FTC Regional Control Award
- 2020 FTC Gauss League Inspire Award Winners

Experience

Team Optix 3749 (FRC robotics team) — Director of Software (2022-Present)

- Responsible for the proper training, collaboration, and involvement of 20+ programmers in developing robot code for control systems in FRC
  - Developed 300+ slides of beginner-friendly curriculum recognized by other teams
- Skills learned:
  - Command-based programming, vision processing, control theory, git, github, object-oriented-programming
  - Team management, project workflow, conflict resolution, communication
- Pit crew & drive team at SDR, LAR, AVR, and Champs (2021-2023)
- Build & Electrical Certified (Summer 2022)

Mechanical Advantage 16884 (FTC robotics team) — Systems Engineer (2020-2021)

- Designed, assembled, wired, and programmed FTC robots utilizing computer-aided design (Solidworks), the FTC java SDK API, and object detection in python (TensorFlow)

Volunteering

She Can Code (nonprofit), San Diego — Frontend Developer & Instructure (2020)

- Taught workshops of 50+ students covering topics such as web development, game development, java, python, and c fundamentals.
- Developed a website for the organization, also implemented portal for students to interact with and access slides (React.js)

OVMS Science Olympiad – Instructor (2021-2022)

- Taught students in weekly 2-hour classes for the build event, Bridges
- 57+ hours

Skills

- Programming Languages: Java, Python, JavaScript (TypeScript), C, HTML/CSS
- Developer Tools/Platforms: Git, GitHub, Amazon Web Services (S3)

FRC Projects

2023 Team 3749 Robot Code • github.com/Team-Optix-3749/Team-3749-2023

Code for controlling our 2023 robot: Viper. Double jointed arm was controlled with PID loops, a mathematical FF model, and state-space control with spline trajectory generation using Bezier curves. AprilTag and shape recognition using the PhotonVision API. Omnidirectional drive base code written with the WPILib API.

2022 Team 3749 Robot Code • github.com/Team-Optix-3749/Team-3749-2022

Code for controlling our 2022 robot: Venom. Automated turret alignment with vision measurements. Autonomous differential drive path following from trajectory generating tools as part of the WPILib API.