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Mithilessh Bhasker

STUDENT DEVELOPER • FTC ROBOTICS SOFTWARE LEAD

Software Lead
FTC Team 16481

Pedro Advisor
12 merged PRs

Kumon Instructor
2 years

Kumon Reading Program
Completer

EDUCATION

Amador Valley High School

Pleasanton, California

Expected Graduation: 2029

SKILLS

- Java
- Python
- JavaScript / TypeScript
- React / Next.js
- Git & GitHub
- FTC SDK / Pedro Pathing
- KiCad / PCB Design
- Onshape / Prototyping

CERTIFICATES

CS50x
Harvard University

Cybersecurity Fundamentals
IBM SkillsBuild

Fundamentals of Remote Sensing
NASA ARSET

Earth Observations for Reservoir and Water Utility Management
NASA ARSET

Stardance Challenge
Hack Club

RECOGNITION

- Control Award - NorCal Regional Championship
- Sustain Award - 3rd Place - Western Edge
- Enrico Fermi Discovery Award - 2nd Place - CRI
- Connect Award - Folsom Qualifier
- Inspire Award - 2nd Place + Finalist Alliance Captain
- Think Award - FIRST Tech Challenge
- AoPS Algebra 2 - 1st Place
- AoPS High School Contest Math - 1st Place
- Kumon Reading Program - Full Completion

EXPERIENCE / LEADERSHIP

- **Robo Racers — Software Lead** — FTC Team 16481

  Lead autonomous software development for the competition robot, turning match strategy into repeatable field performance.
  - Build and tune autonomous routes around scoring positions, obstacles, timing, and robot orientation.
  - Use localization, pose, heading, path state, and telemetry to diagnose failures and improve reliability.

- **Pedro Pathing — Advisor** — 12 merged PRs

  Improve the Quickstart and documentation used by FTC teams to tune, localize, and build autonomous routines.
  - 4 Quickstart changes across two- and three-wheel tuners, auto-tuning, and configuration.
  - 8 documentation updates covering localization, coordinates, Bézier curves, constraints, and setup.

- **Kumon — Instructor** — 2 years

  Worked as a Kumon Instructor, supporting independent learning, explaining concepts, checking work, and encouraging consistent progress.
  - Completed the entire Kumon Reading Program, building advanced comprehension, vocabulary, analysis, discipline, and time-management skills.

- **Equal Horizons — Co-founder** — Assistive technology

  Co-founded accessible assistive-tech product and web prototypes.

SELECTED PROJECTS

Jarvis Voice Assistant — Python • local processing
Custom voice assistant with modular commands and local-first integrations.

OmniSight HUD — Computer vision • robotics
Heads-up display concept for real-time robotics information and clean visual feedback.

Stream Deck PCB — KiCad • hardware
Custom macro pad designed from scratch with programmable keys and a clean PCB layout.

Mycroft Mark II Dev Board — KiCad • embedded systems
Hardware development and board-level prototyping inspired by production PCB systems.