

Sohum Suthar
Class of 2023; Neuqua Valley

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630-768-3378

Work Experience

MySTEMBuddy, Naperville, IL — Board Director: Teacher, Coach, Mentor, Judge | Date: December 2019 - Current

- Taught up to 15 students in STEM-oriented classes to teach advanced programming, robotics, and electricity/magnetism.
- Mentored 10+ robotics teams and led them to Excellence at World Championships
- Presented to 100+ people on robotics and STEM education.

NanoBeasts STEM+ Robotics, Naperville, IL — Teacher, Assistant Teacher | Date: 2017 - 2020

- Taught various STEM related courses (teaching students Scratch, Python, Micro:Bit Makecode, SonicPi, Arduino and more) on weekly Zoom meetings with up to 8 kids. Taught up to 5 classes a week.

Volunteer Experience

NanoBeasts STEM+ Robotics, Naperville, IL — Teacher, Assistant Teacher | Date: 2017 - 2020. **500+ hours**

- Worked alongside other NanoBeasts employees to help teach classes as well as help with STEM events and outreaches.
- Taught/helped teach up to 11 students in STEM-oriented classes that taught programming, robots, etc.
- Worked closely with the teacher to guide children and help them understand the fundamentals of the class while maintaining a focused yet fun learning environment.
- Produced and managed a Youtube channel with over 600k viewers. (**stemguru4u** on YouTube)

First, Naperville, IL — Robot Design Judge | Date: Feb 2020

- Volunteering and Judging for the Robot Design portion of a First Lego League competition hosted by NanoBeastsSTEM+ Robotics.

MySTEMBuddy, Naperville, IL — Outreach Head | Date: Q2 2021-Present. **500+ hours**

Relevant Extracurricular Activities (2018-2022)

NanoBeasts STEM+ Robotics, Naperville, IL — Volunteer, Participant, Teacher, Assistant Teacher | Date: 2018 - 2020

MySTEMBuddy, Naperville, IL — Member of Board of Directors, Volunteer, Participant, Teacher, Assistant Teacher | Date: 2019 - Current

Neuqua Valley High School Robotics Club, Naperville, IL — Club Captain, Lead Programmer, and Designer | Date: 2018 - Current

Neuqua Valley High School/Scullen Middle School Science Olympiad, Naperville, IL — Team Member | Date: 2018 - Current

Illinois Junior Academy of Science, Science Fair, Naperville, IL — Regional and State Participant | Date: 2018 - 2021

MySTEMBuddy VEX AI, Naperville IL — World Championship Participant | Date: 2021-Current

Singularity FTC, MySTEMBuddy — Lead Mechanical and Driver | Date: 2021-Current

Licenses and Certifications

I.T. Certification — Issued By: Google | Date Issued: July 2020

FAA UAV Pilot License — Issued By: Federal Aviation Administration, Issued 3/17/2019

Publications:

Design and Development of AI Augmented Robot for Surveillance of High Radiation Facilities

Authors: K.J. Suthar, M. White, G.K. Mistri, A.K. Suthar, S.K. Suthar

Abstract: Scientific instruments and utility equipment during the operation of high radiation facilities such as the Advanced Photon Source at the **Argonne National Laboratory** express a challenge to monitor. To solve this, we are developing a self-guided artificially intelligent robot that can allow us to take images to create a thermal and spatial 3D map of its surroundings while being self-driven or controlled remotely. This inexpensive robot is operated by an Nvidia Jetson NanoTM.

Technical Skills (Proficiency)

Programming Languages: Python, C++, Java, JavaScript, C, LaTeX, CLIP, Regex, SQL (Markup: HTML, CSS)

Operating Systems: Linux (Arch, Ubuntu, Debian), macOS, Windows

Applications: Anaconda, Inventor, Fusion 360, Blender, Photoshop, Premiere Pro, Final Cut Pro, FL Studio, Logic Pro X, After Effects.

Other Skills: Arduino, Raspberry Pi, IoT, oscilloscope use, PC building/overclocking, soldering, 3D printing, audio equipment, FPGAs.

Languages

English, Spanish, Gujarati, Music Theory

Relevant Coursework

AP Computer Science A, AP Computer Science P, AP U.S. Government, AP Comparative Politics, AP Calculus AB, AP World History, AP Human Geography

In progress: AP Physics Electricity and Magnetism, AP Physics Mechanics, AP Macroeconomics

Notable Awards

Apollo 50 NASA State Champion (Top point score nationally) — Issued By: NASA | Date Issued: 2018

IIT Regional Bridgebuilding competition 2nd place — Issued By: Illinois Institute of Technology | Date Issued: 2022

VEX AI World Championship 8th place + Innovate Award — Issued By: REC Foundation | Date Issued: Robotics Season 2020-2021

Singularity FTC Meet Champions & State Connect + Inspire Award — Issued By: FIRST | Date Issued: 2021

Science Olympiad 1st place (Multiple events) — Issued By: Science Olympiad | Date Issued: 2018 - Current

Neuqua Valley Bridgebuilding School Record — Issued By: Neuqua Valley | Date Issued: 2022

VEX EDR Top 20 State Skills ranking — Issued By: REC Foundation | Date Issued: Robotics Season 2021-2022

AP Scholar Award with Distinction — Issued By: CollegeBoard | Date Issued: July 2022

Volunteer of the Year — Issued By: REC Foundation | Date Issued: 2022

VEX IQ Robotics Excellence and Judges Award — Issued By: REC Foundation | Date Issued: Robotics Season 2020-2021

Best In Materials Science Award — Issued By: Illinois Junior Academy of Science | Date Issued: 2017-2018

DVC Wrestling Conference 6th place — Issued By: NVHS | Date Issued: 2019