Krishnan Shankar He/Him

HS Junior @ TJHSST

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COVER LETTER

I would like to use my programming and engineering skills to contribute to a project at MITRE involving Al and/or Robotics, and help make a lasting impact.

Dates of Availability: Jun 26 2023 - Aug 18 2023

SKILLS

- Full Stack Web Development
 - HTML/CSS/JavaScript, React, Svelte + SvelteKit
 - o Python Flask, Python Django, FastAPI, SocketIO
 - o MySQL, PostgreSQL, SQLite, MongoDB, Firestore
- Fluent Languages: Python, JavaScript, Java
- Development Tools: Git + GitHub/GitLab, Arch Linux and Ubuntu/Debian, Raspberry Pi's, JetBrains IDE's
- Cloud Services: Heroku, Google Cloud Platform (GCP), Vercel, Amazon Web Services (AWS)
- Hackathons: Build complete apps within a weekend

EDUCATION

Current **Junior** (Class of 2024) at Thomas Jefferson High School for Science and Technology (TJHSST)

- Current GPA: 4.303/4 (3.908/4 Unweighted)
- Intended Major: Computer Science/Engineering
- Relevant Courses: AP Computer Science A+ (2022), Artificial Intelligence 1 and 2 (2023), Robotics 1 and 2 (2023), Analog and Digital Electronics (2023)

Test Scores:

• PSAT: 1480 (Oct 2021) and 1500/1520 (Oct 2022)

• SAT: **1530/1600** (August 2022)

• ACT: 36/36 (October 2022)

AWARDS

- 2x Gold President's Volunteer Service Award: For volunteering 100+ hours that year (2021, 2022).
- Junior ACSL: All-Star Finalist and #1 in school (2019).
- CyberPatriot: Led a team to the semifinals (2019).
- Science Olympiad: 5+ 1st Place Medals (2019, 2020).

EXPERIENCE

TJ Unmanned Aerial Vehicle - Programming Lead FEB 2021 - PRESENT

- A team designing a UAV for the <u>SUAS Competition</u>.
- Integrated a communications system using 900MHz, 2.4GHz, and 5GHz radio and WiFi links to connect to the plane's onboard flight computer, raspberry pi, and camera for flight control and live image viewing.
- Developed a <u>GroundStation</u> (Python Flask + React) from scratch to monitor and control the above.

<u>TJ Computer Systems Lab</u> - Student Sysadmin JUN 2021 - PRESENT

- Managing and developing features for the school's <u>Intranet</u> (Python Django + HTML/CSS/JS + PostgreSQL), used by 2000+ students and teachers daily for extracurricular signups, buses, and more.
- Responsible for 100+ student workstations, a 50+ node cluster system, and our 5 supercomputers.

HackTJ - Webmaster

JUN 2021 - PRESENT

- The original yearly HS hackathon with 400+ hackers.
- Maintaining the organization's website (Svelte).
- Developing a judging system (Python Flask + Firestore) from scratch to manage judging hackathon projects, eliminating bias, and choosing a winner.

<u>HackAlphaX</u> - Technical Lead, Operations Lead DEC 2020 - PRESENT

 Developed the organization's <u>website</u> (Python Flask + HTML/CSS/JS + Firestore) from scratch, complete with a hacker registration and dashboard system.

<u>Project Caelus</u> - *Electronic Engineer, Programmer* OCT 2021 - FEB 2022

- A team designing the first HS liquid-fueled rocket.
- Designed and soldered a printed circuit board to power and control valves on a rocket remotely.