KAVYAN PATEL

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EDUCATION

University Of California Santa-Cruz Honors (California Scholars Program)   **Santa-Cruz, CA**
B.S. Computer Science   **September 2022 - July 2026**

Dougherty Valley High School   **San Ramon, CA**
Cumulative GPA: 4.1   **August 2018 - June 2022**
Relevant Coursework: AP Computer Science A, AP Statistics, AP Calculus AB, Honors Physics, AP Biology, AP Macro/Micro

University of Michigan   **August 2022 - Present**
Python For Everybody Coursera, Web Application Technologies, and Django

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EXPERIENCE

Safari Kids   Pleasanton, CA
Coding Summer Intern   **June 2022 - September 2022**
- *Designed and taught software and hardware-related topics to middle schoolers, including robotics, claymation, web design, python, and 3D printing.*

Dougherty Valley High School Robotics   San Ramon, CA
President   **2021 - 2022**
- *Managed logistics for four teams while gathering resources for the addition of a fifth team*
  - *Registering and planning transport to tournaments*
  - *Supervising recruiting process for new members and the curriculum development for the organization's novice program*
  - *Managed day-to-day affairs and policy upkeep*
- *Led the planning and setup for one of the biggest tournaments in NorCal, with 50 teams in attendance.*
- *In charge of planning and logistics for an out-of-state trip to the VEX World Championships, where DVHS Robotics had its most successful run in 12 years, qualifying for a round-robin among the top 20 teams in the world.*

Captain and Lead Programmer for VRC Team 5776A   **2020 - 2022**
- *Led the Design and Programming of VRC Team 5776A's competition robot and assisted in the building process.*

Treasurer   **2020 - 2021**
- *Managed $35,000 in funds with the creation of a yearly budget*

Public Relations Officer   **2019 - 2020**
- *Raised funds through sponsorships, including a $7,500 sponsorship from Autodesk*
- *Led the planning and organization of a robotics summer camp for middle schoolers, through which the organization raised $28,000*

PROJECTS

Roaming In Space
- *Created a 2-Dimensional spaceship game using Python and a python wrapper for Simple DirectMedia Layer called Pygame.*
- *Roaming In Space is a work in progress and currently features a menu screen, pause menu, scorekeeping, movement functions, OOP, simple graphics and event handling and state checking.*
- *Code for Roaming In Space can be found at: https://github.com/K-Pat/PygameProject.*

VRC Team 5776A
- *Code for VRC Robot, 5776A. coded in C++ and developed over the course of 1 year.*
- *Implemented 2D Motion Profiling by using PID feedback loops which read values from integrated motor encoders and the average heading value from two inertial sensors combined to provide relative and absolute movements.*
- *Developed Autonomous and Driver assisted movements, as well as driver control code.*
- *Utilized electronics such as motors, potentiometers, optical shaft encoders, and pneumatics.*
- *Created a state machine system to manage 5 subsystems.*
- *Link to the code: https://github.com/K-Pat/5776A_2021-2022*

TECHNICAL SKILLS
- *Python, Java, and C++ programming languages, SQL, Django, Flask, HTML*
- *Basic control theory involving motion profiling, PID feedback loops, and Odometry*
- *Structural and functional design for robots, including bracing, electronic, and pneumatic systems, 3D printing, Autodesk Fusion 360 CAD*