Abhinav Vedati

Creative innovator and hacker with a passion for learning.

OBJECTIVE

To better the world through the use of technology. Looking for an opportunity to use my skills to solve tough problems.

PORTFOLIO

HTTPS://AVEDATI.GITHUB.IO

A collection of my projects, including but not limited to: a programming language, a small lisp interpreter, a couple of web scrapers, and some HTML tools and games.

SKILLS

Fluent in HTML, CSS, JavaScript, Python, C, C++, Java, and Bash.

Proficient in Ruby, Go, Kotlin, Swift, Assembly, Language and Rust.

Beginning PHP and SQL.

EXPERIENCE

Tynker Inc., Mountain View, CA — *Intern*

June 2016 - August 2019

- Created the foundation for the JavaScript course at Tynker by building simple games that are easily emulated by users.
- Tested and reported on the Crystal Clash Course on Tynker, including creating test bots for users to play against on the site, finding bugs in Crystal Clash, and providing feedback on the user interface of the course.
- Programmed weekly example projects and tutorials aimed at teaching STEM to kids and providing fun holiday-themed activities which teach programming concepts effectively.

Khan Lab School, Mountain View, CA — *Teaching Assistant*

September 2019 - PRESENT

- Helps teach a Pre-Algebra class 3 times per week. Meets one-on-one with each student to plan projects which will enhance the students' learning experience.
- Helps teach an AP Calculus BC class 1 time per week. Helps students with concepts which they are struggling with on Khan Academy and on a paper-based problem set. Creates problem sets for students on integration and infinite series and sequences, aimed at helping them learn the content in an engaging and challenging manner.

Khan Lab School Robotics, Mountain View, CA — *Head Of Vision Team*

January 2019 - PRESENT

- Optimized FRC Dashboard settings to maximize camera FPS and minimize camera latency.
- Used Java and OpenCV to create a vision system capable of reliably detecting a line of white tape and returning the direction and magnitude of motion necessary to align an FRC robot onto that line.

Khan Lab School Basketball, Mountain View, CA — *Shooting Guard*

September 2019 - PRESENT

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Design The Future, Stanford, CA — *Admissions Team*

December 2018 - PRESENT

- Brainstormed with the CEO of DC Design and the rest of the Design The Future admissions team to create an efficient and fair admissions process for Design The Future.
- Reviewed applications for Design The Future, looking for criteria concerning applicants' empathy and desire to solve real-world problems.
- Gave feedback to the CEO of DC Design on the Design The Future online course with the objective of enabling high school students to create real-world impacts in a problem-domain of their choice using user-based problem solving.

ARCC China — *Community Service Volunteer*

June 2019

- Taught English to 1 class of elementary school students for three hours.

Communication First, Mountain View, CA — Co-Founder, *Web Developer, & Outreach*

October 2018 - March 2019

- Interviewed members of the Deaf and Hard of Hearing community to develop a product to aid the Deaf and Hard of Hearing community.
- Developed a website aiming to teach people American Sign Language, in order to bridge the communication gap between the Deaf and Hard of Hearing community and the non-DHH community.

Cube Club - Mountain View Library, Mountain View, CA — *Volunteer*

September 2016 - August 2018

- Taught students from elementary school through high school how to solve the Rubik's Cube.

The Khan Lab School Inspire Magazine, Mountain View, CA — *Computer Science Division Lead & Assistant Editor*

July 2016 - August 2018

- Led a team of Computer Science enthusiasts to write articles about Computer Science.
- Wrote an article about the Towers of Hanoi program.
- Used LucidPress to edit a magazine about the 2017 – 2018 school year at Khan Lab School.

Design The Future, Stanford, CA — *Engineer*

June 2018

- Met with a software engineer at IBM who is paralyzed from the neck down in order to understand how to best make in impact in his daily life.
- Prototyped and designed an acrylic desk with the purpose of allowing him to use his laptop to collaborate with his coworkers and store his laptop inside of the desk without the use of his hands.
- Presented our prototype of the product to the software engineer.

ARCC Cambodia — *Community Service Volunteer*

March 2018

- Built biosand water filters for eight rural families; filters are capable of cleaning water for up to 40 years.
- Taught English to 2 classes of elementary school students in rural Siem Reap.

Continental AG, San Jose — *Intern*

July 2017 - August 2017

- Assembled a DVR to collect traffic data in the city of Milpitas.
- Created a presentation on Tensorflow used to build an artificially intelligent car detector.

ARCC Cuba — Community Service Volunteer

March 2017

- Painted a living area and school for children with communication/learning challenges.
- Taught English to 1 class of elementary through high school students for 3 hours.

- Assisted 6 families by bringing food directly to their homes.

EDUCATION

Khan Lab School, Mountain View, CA
September 2015 - PRESENT

One of the most senior students at an innovative startup school affiliated with Khan Academy.

- School Ambassador for prospective and new students
- Volunteer Tutor - computer science and mathematics
- Creator of many passion projects, including a facial recognition neural network, a spread of disease simulation project, and a smart calendar system.
- Ambitious Student:
    - Present advanced coursework includes:
        - Multivariable Calculus
        - AP Biology
        - AP English Language
        - AP World History
        - Chemistry through a dual-enrollment program with Foothill College
        - Honors French
    - Past advanced coursework includes:
        - AP Computer Science A - Self studied
        - AP Calculus BC - Self studied
        - AP Physics C: Mechanics
        - AP Physics C: Electricity and Magnetism
        - AP Statistics
        - SAT Subject Test in Physics - Self studied
        - SAT Subject Test in Mathematics Level II - Self studied
    - Advanced placement exams include:
        - AP Computer Science A - 5
        - AP Calculus BC - 5
        - AP Physics C: Mechanics - 5

INTERESTS

In my spare time, I love to program on my computer. Most of the time, I build simple clones of popular computer games, compilers / interpreters for programming languages, and neural networks.

- For example, I recently built a small minecraft clone using JavaScript and HTML5 Canvas. I am currently replicating it in C.
- I have created three programming languages in C. I taught myself how to build compilers and interpreters using online resources and the book Compiler Design in C by Allen I. Holub.

- My favorite applications of calculus are neural networks! I learned about neural networks through my AP Calculus BC class and using online resources, including the YouTube channel Luis Serrano.

Additionally, I enjoy solving Physics and Calculus problems. Currently, I am learning about mirrors and optics.

I also enjoy learning about World History and American History by watching videos created a YouTube channel called Crash Course. Using Crash Course, I also enjoy learning about Geography on Crash Course, including learning about countries and cities, mainly in Asia, Africa, and Europe.

Finally, I enjoy studying neuroscience, practicing Brazilian Jiu Jitsu, computer programming, reading about human psychology, and playing classical guitar.