Saurabh Totey Résumé

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Education

2015 - 2019

Fairview High School

High School Diploma

International Baccalaureate Diploma

GPA: 3.9 unweighted, 4.75 weighted

- Magna Cum Laude
- National Merit Commendationalist
- National Honor Society Member

2019 - 2023

University of Colorado at Boulder

Physics (BA) and Computer Science (BS)

Minor in Math

GPA: 3.846

- President Joseph A. Sewall Esteemed Scholar Award
- Engineering Merit Scholarship

Experience

September 2016 - August 2019

Kumon of Lafayette

Student Assistant

- Taught students various levels of reading and math. Tasks included teaching students how to read, analyze passages in literature, count, and do basic calculus.
- Managed center necessities such as cleaning tables and sharpening pencils.

May 2018 - Present

PhET Simulations

Student Developer

- Currently write JavaScript code to develop educational, scientific simulations for use on browsers.
- Programming work includes reading others' code, writing code directly for simulations, writing code to package libraries, and writing and fixing common code to add new features, fix memory leaks, and improve performance.
- Contributed major portions of code for the Blackbody Spectrum, Curve Fitting, and Number Line Integers simulations.

Projects

Portfolio Website

https://www.github.com/SaurabhTotey/Portfolio-Website

A portfolio website that has a large emphasis on simplicity and accessibility. The website is an attempt to display "personal flavor" while also being similar in appearance to a near-pure HTML website. The largest design constraint is that the website is static. Visible at SaurabhTotey.com.

React *Accessibility* *JavaScript* *HTML5* *CSS3*

Code Kata Snek

https://github.com/FHSCodeClub/Code-Kata-Snek

A backend with an API for a game of multiplayer turn-based snake (hence dubbed "snek"). Allows individual players or teams to control their own snek that dies when it runs into any non-apple tile. Sneks can eat deterministically-placed apples to grow and make it easier to kill other sneks. A snek's score starts at 0, and has its length added to its score every turn that it is alive. Each turn, a snek can move forward, left, or right, and the snek is controlled with API calls from each individual/team. This snek game API was made for Fairview's Code Club.

Kotlin *Spring Boot* *REST APIs* *JavaScript*

d2d

https://github.com/Prophets-of-Profit/d2d

A now-deprecated graphics library built in the D language using LibSDL2. Built for making 2D games and handling graphics, input, sound, text, and math. Was made to also wrap most of the LibSDL2 functionality into idiomatic object oriented and functional code.

D *LibSDL2*

Discord Walker Bot

https://github.com/SaurabhTotey/Discord-Walker-Bot

A small JavaScript project that polled a channel on a Discord server every weekday to ask who would walking to school on that day.

JavaScript *HTTP Requests*

Leadership

2017 - 2019

Fairview Code Club President

Managed club activities, meetings, and events for Fairview's Code Club. Events included code competitions and help sessions.

2017 - 2018

Fairview Speech and Debate Captain

Taught members debate skills for the Public Forum debate event in addition to managing meetings and organizing snacks.

2018 - 2019

Fairview Robotics Lead Autonomous Programmer

Helped manage the programming team of the Fairview Robotics club and developed autonomous code for the team's robot.

2017 - 2019

Fairview Stock Market Club Technology Master

Managed the Fairview Stock Market Club website and periodically gave presentations about algorithmic trading.

Awards

2018
Lockheed Martin Code Quest First Place Winner

2016, 2018
Speech and Debate State Qualifier

2017, 2018, 2019
Future Business Leaders of America Nationals Qualifier

2019
3rd in Math/Computer Science Category at the
Corden Pharma Regional Science Fair

Relevant Coursework

Course Number	Course Name	Grade
MATH 2400	Calculus III	B
MATH 2001	Introduction to Discrete Mathematics	A
MATH 2130	Linear Algebra for Non-Math Majors	A
MATH 3140	Abstract Algebra I	A
MATH 3430	Ordinary Differential Equations	WIP
MATH 4900	Independent Study on Heaps	WIP
CSCI 2275	Programming and Data Structures	A
CSCI 2184	Discrete Structures	WIP
CSCI 2400	Computer Systems	WIP
PHYS 2170	Foundations of Modern Physics	A
PHYS 1140	Experimental Physics I	A
PHYS 2210	Mechanics and Math Methods 1	WIP
PHYS 2150	Experimental Physics II	WIP