Saurabh Totey Résumé

• Website: SaurabhTotey.com • Email: SaurabhTotey@gmail.com • Phone: 1+ (720) 648-2674 • GitHub: SaurabhTotey

Education

2019 - 2023

University of Colorado at Boulder

Physics (BA) and Computer Science (BS)

Minor in Math

GPA: 3.881

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

2015 - 2019

Fairview High School

High School Diploma

International Baccalaureate Diploma

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

Work Experience

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.

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.

Indicative Personal 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*

Independent Studies

Summer 2020 - Present

SDSS Apogee 2 Spectra Plotting

Dr. Guy Stringfellow

Am currently working with Dr. Stringfellow to plot the Sloan Digital Sky Survey Apogee 2 star spectra (and other miscellaneous star information) with Python.

Spring 2020

Independent Study on Coxeter Groups

Dr. Tianyuan Xu

Worked with a small group of other undergraduate students, a graduate student, and Dr. Xu to implement Python code with the SageMath library that takes in a coxeter group and a word formed from the group elements to determine whether the given word is fully commutative.

Leadership

2020 - Present

HackCU Organizer

Am currently helping development for the HackCU website and will host workshops over the school year.

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	Abbreviated 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	A
MATH 4900	Independent Study on Coxeter Groups	A
MATH 3001	Analysis I	B
CSCI 2275	Programming and Data Structures	A
CSCI 2824	Discrete Structures	A
CSCI 2400	Computer Systems	A
CSCI 3002	Human Computer Interaction	A
CSCI 3022	Intro to Data Science	A
CSCI 3308	Software Development Methods/Tools	A
PHYS 2170	Foundations of Modern Physics	A
PHYS 1140	Experimental Physics I	A
PHYS 2210	Mechanics and Math Methods I	A
PHYS 2150	Experimental Physics II	A