# Aditya Bhaskar

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## *Skills*

**Programming Languages:** C, Python, C++, SQL
**Libraries:** NumPy, Pandas, SciPy, Scikit-learn, Seaborn, Matplotlib, PyGame, Kivy, Panda3D
**Other**: Linux, Git, HTML, CSS, Vi/Vim, RISC-V, Blender 3D, LaTeX, Digital, 3D Printing.
**Spoken Languages:** Fluent (English, Hindi), Intermediate (French, Spanish)

## *Education*

**UCSC | University of California, Santa Cruz** Sept. 2020 – Jan 2025
Bachelor of Science in Computer Science
Bachelor of Science in Mathematics

**KRM | K. R. Mangalam World School, New Delhi** Apr. 2012 – June 2020
Middle School
High School

## *Experience*

**Tata Power-DDL, New Delhi, India | Intern** July 2022 – Sept 2022

◦ Assist the team in developing and implementing an optical character recognition system. Training the OCR model to accurately recognize different types of text and formatting, integrating the OCR system with the existing software systems, and testing and troubleshooting the OCR system to ensure it was functioning correctly.
◦ Assisted in researching new OCR technologies and techniques to improve the efficiency and accuracy of the system.

## *Projects*

**Color Blindness Simulator**

- Can simulate bmp image files to look like what a person suffering from Color Blindness would see. Emphasizes opening, reading, writing, and closing files. Using C, we can utilize its usability as a low-level language to accurately alter bits in memory.

**Finding the most efficient route between multiple cities**

- Given different cities and the distance between them, this program can accurately find the most efficient route between them. It uses the graph data structure to function efficiently.

**Huffman Encoder/Decoder**

- Can encode or decode any text file depending on the user written in C. Utilizes Node data structures, Priority Queues, and Tree data structures.

**Tic-Tac-Toe (vs Computer and Interactive App)**

- There are two versions of this program. One is based on user input through keyboard and implements the smart computer player using Minimax. And the other is based on an app designed with Python which uses user input through click.

**Crossword Solver**

- Using the dataset of given words, this program can accurately solve any crossword problem.

**Data Visualization**

- Used data scraping to collect data from various statistical websites to make a detailed data analysis on different soccer players and clubs. Used various python libraries to make graphs and plots.

**Soccer Game Predictor**

- Used data scraping to collect data from various soccer statistical websites to accurately predict the outcome of soccer game using xG.

**3D Graphs**

- Modeled and created various plots and 3D graphs using different python libraries.

**As-is Game**

- It is a game based on multiple situations and relies completely on the user's input and decision making abilities.

## *Classes taken at UCSC*

**CSE 12 | Computer Systems and Assembly Language**
**CSE 13S | Computer Systems and C Programming**
**CSE 16 | Applied Discrete Math**
**CSE 20 | Beginning Programming in Python**
**CSE 30 | Programming Abstractions: Python**
**ECE 30 | Engineering Principles of Electronics**
**MATH 19A | Calculus for Sci, Engineering, and Math**
**MATH 19B | Calculus for Sci, Engineering, and Math**
**MATH 21 | Linear Algebra**
**MATH 23A | Vector Calculus**
**MATH 23 B | Vector Calculus**
**MATH 24 | Ordinary Differential Equations**
**MATH 100 | Intro to Proof and Problem-Solving**
**MATH 105A | Real Analysis**
**MATH 117 | Advanced Linear Algebra**
**STAT 131 | Introduction to Probability Theory**

## *Recognitions & Extracurriculars*

**Undergraduate Dean's Scholarship | University Award (UCSC)**

Received the Dean's Scholarship Award, a prestigious $20,000 scholarship recognizing academic excellence and outstanding achievements. The award not only provided financial assistance but also acknowledged my dedication, hard work, and achievements in my field of study. It motivated me to strive for more success in my academic career.

**Club Member | Santa Cruz Artificial Intelligence (SCAI)**

Gained hands-on AI experience and learned from professionals through club activities and projects. Attending meetings and events, discussing advancements, and collaborating on real-world projects. Being a club member allows networking and staying current with trends in AI.

**Club Member | UCSC Association for Computing Machinery (ACM)**

As a member of UCSC ACM, I've gained valuable coding skills, explored emerging technologies, and connected with industry professionals. Collaborating on projects has improved my teamwork and problem-solving abilities. Being part of UCSC ACM has enriched my understanding of computer science and fueled my passion for the field.

**Club Member | UCSC Google Developer Student Clubs (Google DSC)**

As a member of Google DSC (Developer Student Clubs), individuals participate in coding workshops, hackathons, and tech talks to enhance their technical skills. Collaborating on real-world projects and networking with peers and industry experts fosters personal growth and contributes to the developer community.

**Squad Player | Intramural Soccer (UCSC)**

Playing college intramural soccer offers a chance to compete, stay active, and connect with fellow students who share a love for the sport. It enhances soccer skills, teamwork, and camaraderie, providing a refreshing break from academics and fostering a sense of belonging within the college community.

## *Other Achievements*

**High School | K. R. Mangalam World School, New Delhi**

As the sports captain and a member of the school's prefectorial board, I took on a leadership role, organizing and promoting sports activities while inspiring my peers. Additionally, I captained my school's soccer team, showcasing my skills as a forward and contributing to the team's success. I also played a key role as an all-rounder in the cricket team, scoring runs and taking wickets. Alongside my sporting achievements, I was honored with the Scholar Badge, recognizing my excellence in both academic and extracurricular activities. These experiences have shaped me into a dedicated and well-rounded individual, committed to making a positive impact.

**Volunteer | Bharat Learn (NGO)**

I supported Bharat Learn, an NGO that focuses on educating underprivileged children in India by teaching basic reading and math skills, assisting with curriculum development, mentoring students, and raising awareness about the importance of education. Through this experience, I gained valuable insights into the challenges faced by underprivileged children and the importance of education in breaking the cycle of poverty.