

# Aditya Vikram Singh

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## EDUCATION

### University of Massachusetts Amherst

Aug 2019 – May 2023

#### B.S. (Honors) in Computer Science and Mathematics (Statistics and Data Science)

GPA: 4.00/4.00

- **Distinctions:** Member, Commonwealth Honors College | Dean's List (All Semesters) | Chancellor's Award Scholarship
- **Selected Coursework:** Algorithms<sup>†</sup>, Artificial Intelligence, Computer Systems Principles, Probability Theory, Discrete Mathematics, Programming Methodology, Data Structures, Data Analysis in R

<sup>†</sup>: **Honors**

### Delhi Public School, R. K. Puram

Grad. May 2019

#### High School Diploma, Science with Computer Science

12<sup>th</sup>: 96.0% | 10<sup>th</sup>: 10.0 CGPA

- **Distinctions:** AP Scholar with Distinction Award | Gold Medal for Academic Excellence | Gold Medal for Excellence in Aerospace | Winner, International Space Settlement Design Competition 2018 | First Prize, NASA Ames Space Settlement Design Contest 2017

## SKILLS

- **Languages:** Python, Java, JavaScript, C/C++, R, SQL
- **Web Development:** React.js, Bootstrap, Node.js, Django, Flask
- **SWE:** OOP, Data Structures, Design Patterns, Algorithms
- **Tools/Libraries:** Git, GitHub, Selenium, ggplot2, Bash, Zsh

## EXPERIENCE

### BUILD UMass

Sep 2020 – Present

#### Software Developer

Remote

- Involved in the web development aspect for the club's pro-bono services and corresponding technical consultations with local clients
- Developing a website for the UMass Entrepreneurship Club using React, Bootstrap, and Netlify CMS, in a team of 4 members

### VirtuBox Infotech Private Limited

Jul 2020 – Aug 2020

#### Business Development Associate

Noida, India

- Developed engineering workflows and prepared suggestions for a smoother transition from Vue.js codebase to React codebase for CMS
- Worked on competitor analysis, keyword research, and image production, for app-store optimization of 5 client applications
- Produced 10+ video tutorials explaining the functionality of the company's CMS dashboard, and published them on YouTube

### College of Information and Computer Sciences, UMass Amherst

Jan 2020 – May 2020

#### Peer Tutor

Amherst, MA

- Volunteered to participate in one-on-one peer tutoring for 2 introductory computer science courses, as part of optional curriculum
- Conducted weekly meetings with tutees to go over basic programming principles and discuss assignments in Java and pseudocode
- Explained various implementations of data structures like stacks, queues, hash-maps, BSTs, heaps and graphs to 10+ students

### Student Council, Delhi Public School, R.K. Puram

Apr 2018 – Apr 2019

#### President

New Delhi, India

- Oversaw student discipline and represented the students' interests at 20+ school events for fairer policies pertaining to them
- Liaised between students, faculty, and administration, and supervised most student-run events in lieu of school coordinator

## PROJECTS

### Connect 383

Python

Feb 2021 – Mar 2021

- Programmed gameplay agents for 2-player adversarial search in an unbounded version of Connect 4, for an *Artificial Intelligence* course
- Deployed cumulative variants of complete minimax, heuristic-based finite-lookahead, and  $\alpha$ - $\beta$  pruning algorithms for optimal gameplay

### Entrepreneurship Club Website

React, Bootstrap, & Netlify CMS

Sep 2020 – Present

- Developing a modern, scalable organizational website for *UMass Entrepreneurship Club*, as part of a pro-bono community engagement
- Creating the front-end with Argon Design System principles, and integrating Google Calendar API for scheduling events for website

### Clue Text Adventure Game

C

Sep 2020 – Oct 2020

- Engineered a command-line application around a variant of a text-adventure game of Clue for a course on *Computer Systems Principles*
- Programmed gameplay mechanics consistent with popular text-adventure games, and generated randomized win strategies and moves

### DocuSign eForm Application

Flask & DocuSign eSignature API

Aug 2020 – Sep 2020

- Designed a web app for streamlining NGO logistics through electronic forms as a submission for *DocuSign Good Code Hackathon 2020*
- Assembled the back-end for handling volunteering/donation forms, and implemented support for digital signatures using sponsor API

### Employment Diversity Study

R & ggplot2

Mar 2020 – Jul 2020

- Analyzed data from an observational study of tech-sector employment diversity in Silicon Valley for a course on *Data Analysis in R*
- Performed data cleaning and vectorization, conducted statistical operations, visualized data plots and systematized predictive models