Aditya Vikram Singh

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EDUCATION

University of Massachusetts Amherst   GPA: 4.00/4.00   Aug 2019 - Dec 2022
Bachelor of Science in Computer Science and Mathematics (Statistics and Data Science)   Amherst, MA
- **Distinctions:** Commonwealth Honors Scholar, Dean's List (All Semesters), Chancellor's Award Scholarship
- **Organizations:** Software Developer @ BUILD UMass, Tech Developer @ HackUMass Organizing Team, Member @ UMass ACM
- **Coursework:** Search Engines*, Data Management*, Software Engineering*†, Algorithms†, Artificial Intelligence, Computer Systems Principles, Probability Theory, Discrete Mathematics, Programming Methodology, Data Structures, Data Analysis in R, Linear Algebra, Multivariate Calculus, Statistics I   *: **In-Progress**, †: **Honors**

SKILLS

Languages: JavaScript, Java, Python, C, C++, R, SQL   **Frameworks:** React, Redux, Node.js, Express, Django, Flask, Bootstrap
Databases: MongoDB (mongoose), PostgreSQL, MySQL   **Development:** Git, Docker, SwaggerUI, Postman, Selenium, Agile, Scrum

EXPERIENCE

CICS @ UMass Amherst, Undergraduate Course Assistant   Amherst, MA (In-Person)   Aug 2021 - Present
- Assist the instructor and TAs to help students taking CS 240 understand the principles and applications of Probability Theory
- Grade homework assignments for 300+ students and provide constructive feedback to help students learn better
- Respond to students' questions on Piazza promptly to clarify core concepts and resolve doubts pertaining to course materials

InnovationM Technologies, Software Development Intern   Noida, India (Remote)   Jun 2021 - Aug 2021
- Developed a grievance redressal platform for internal use by 200+ employees from scratch, in a team of 2 JavaScript developers
- Engineered the backend using Node.js + Express server and modelled the database layer using MongoDB through mongoose wrapper
- Programmed the frontend using React along with Redux state management and performed partial API integration of 10+ endpoints
- Containerized the application using Docker for ease of deployment as a service in a microservice architecture framework

Virtubox Infotech, Business Development Associate   Noida, India (Remote)   Jul 2020 - Aug 2020
- Composed engineering workflows and prepared 10+ comprehensive suggestions for transition from Vue.js to React codebase for CMS
- Carried out 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

PROJECTS

Project URefer (github.com/suikac/compsci-320-team-5)   **React, NestJS, MySQL**   Sep 2021 – Present
- Engineering the backend functionality of a job referral portal from scratch, as part of Software Engineering integrative experience
- Performed knowledge transfer to 4 new frontend developers for React-based UI development and axios API integration from server
- Presenting updates and demonstrations of product features to client, operating in an Agile Scrum workflow with 10 team members

HackUMass Website (github.com/fuseumass/hackumass.github.io)   **HTML, CSS, Ruby on Rails**   Sep 2021 – Present
- Overhauling the HackUMass IX landing website with new functionalities and UI improvements, along with 10+ tech members
- Developing new features and constraints in Ruby on Rails framework for HackUMass Dashboard, and tackling 30+ unresolved issues
- Reducing repetition in 5+ sections by transitioning the landing page to a React framework for easier updates and greater abstraction

Elementary Chatbot (github.com/AVS1508/elementary_chatbot)   **Python, Rasa, spaCy**   Jun 2021 – Aug 2021
- Built a Rasa chatbot for Facebook Messenger using spaCy NLP components as a 12-week externship project with Sopra Steria
- Tuned the chatbot to focus on 50+ COVID-19 specific queries and accordingly specified responses using Rasa's built-in interface
- Created a 24-page report elaborating on the project's use cases and suitability for social good through natural language understanding

Connect 383   **Python**   Feb 2021 – Mar 2021
- Programmed gameplay agents in Python for 2-player adversarial search in an unbounded version of Connect 4 for a course on AI
- Deployed recursive variants of complete minimax, heuristic-based finite-lookahead, and α-β pruning algorithms for optimal gameplay

Perpetual Crusades (github.com/AVS1508/perpetual-crusades)   **React, Bootstrap, CSS Grids**   Sep 2020 – Sep 2020
- Designed a medieval-themed dice board game with 15+ role-playing elements analogous to Dungeons & Dragons for PennApps XXI
- Developed character selection menu, implemented randomized 6-face dice throw, and modeled board with real-time state notifications