Varun Ritesh Gandhi

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EDUCATION

University of Massachusetts Amherst

Bachelor of Science in Computer Science, minor in Mathematics and Business (GPA: 3.89) **Jan 2021 – Dec 2024**

Distinctions: Dean's List Honors, Chancellor's Award Scholarship ($56,000)

Coursework: Software Engineering, Data Structures, Algorithms, Programming Methodologies, Operating Systems, Artificial Intelligence, Big Data Processing*, Computer Networks, Probability and Statistics, Discrete Mathematics, Abstract Algebra*

SKILLS

Languages: Python, JavaScript, TypeScript, Java, C/C++, HTML, CSS, SQL

Frameworks and Libraries: React.js, Node.js, Flask, Bootstrap, Django, jQuery, Express.js, Mongoose, Pandas, NumPy

Cloud and Tools: AWS, Google Cloud, Microsoft Azure, Terraform, Git, Docker, MongoDB, Linux/Unix, Agile, Postman

Certifications: The Complete Web Development Bootcamp (Udemy), Software Engineering Virtual Experience (JP Morgan)

EXPERIENCE

Adani Group Cloud Engineering Intern May 2023 – Present

- Provision and deploy EC2 and Compute Engine Instances, and Azure VMs as per the requirements of various business units within Adani and closely work with Wipro and IBM developers to monitor development of servers on the dedicated VMs.
- Facilitate seamless migration of virtual machines from two newly acquired companies to Adani's dedicated AWS servers.
- Develop Terraform scripts to provision Azure VMs, making deployment 50% faster as compared to manual methods.

Duck Creek Technologies Software Engineering Apprentice Feb 2023 – May 2023

- Developed a time tracking platform from ground up for internal use of 1900+ employees in a scrum team of 9 developers.
- Constructed the client-side in React.js, implementing methods for large-scale UI components that consumed served JSON.
- Programmed server-side logic for the portal using NodeJS, and MongoDB and created auth tokens to make the site secure.
- Created 6 API endpoints and achieved a 95% success rate in handling concurrent requests with the help of Axios promises.

UMass Advanced Learning Technology Lab Undergraduate Research Assistant Aug 2021 – May 2022

- Developed games on Wearable Learning Platform to test its effectiveness for teaching K-12 science through mobile games.
- Conducted an IRB-approved study with graduate students from UMass College of Education for user feedback on games.
- Presented research findings and poster to UMass faculty and the ERSP National Conference.

PROJECTS

FlickFinder – Movie Recommender System Python, Flask, Pandas, NumPy, HTML, CSS, Bootstrap, Docker

- Developed a web application using Flask to implement a collaborative filtering-based recommender system by creating a user-friendly interface that allowed users to input a movie preference and receive personalized recommendations.
- Used singular value decomposition to factorize the movie-user ratings matrix and cosine similarity to recommend movies.
- Containerized the application and deployed it on Render, resulting in 40% reduction in deployment time & 99.9% uptime.

Binary Buddy Allocator (Link) C, C++, Makefile

- Created a memory allocator which made the use of recursive binary splitting of free memory regions in the heap into halves until a block of requested size is found. Coalesced free regions in heap using a similar technique when memory was freed.
- Designed a Binary Tree ADT using structs where each node stored a pointer to an offset of the heap memory.
- Implemented recursive DFS algos to traverse through the binary tree and find free nodes from heap for memory allocation.

The Simon Game (Link) HTML, CSS, JavaScript, jQuery, DOM

- Developed a single player memory game requiring players to accurately recall and select next color that flashes on screen.

LEADERSHIP & EXTRA-CURRICULAR

Manning CICS - Undergrad Teaching Assistant – Grade Assignments for the Operating Systems course and hold office hours.

Microsoft – Tech Resilience Program Participant – Paired with two SWEs at Microsoft in a 6-week mentorship program.

UMass Residential Life – Peer Mentor – Build inclusive environment for freshmen, aiding academic transition to college.