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) **Feb 2021 - 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*, Computer Networks, Probability and Statistics, Discrete Mathematics, Advanced Linear Algebra*

SKILLS

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

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

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

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

EXPERIENCE

Adani Group Software Engineering Intern May 2023 – Present

- Automated identification of idle resources in Adani's Google cloud infrastructure by developing python scripts leveraging Google cloud APIs, achieving cost reductions of 35%. Architected a MySQL DB to store the data retrieved from the API calls.
- Spearheaded development of a full stack dashboard using React.js and Django REST framework to visualize and analyze the collected data, utilizing Axios for frontend API calls and Django token authentication for secure backend API authentication.
- Containerized the server side using Docker and deployed it on a Compute Engine instance using Remote Desktop Protocol.

Duck Creek Technologies Software Engineering Apprentice Feb 2023 – May 2023

- Developed a time tracking platform for internal use of 1900+ employees from ground up in an agile team of 9 developers under the guidance of a Sr. SWE at Duck Creek for academic credit as a part of the software engineering course at UMass.
- Constructed the client-side in React.js, implementing methods for large-scale UI components that consumed served JSON.
- Programmed server-side logic of portal using Node.js, Express.js, and Mongoose, and stored employee data in MongoDB.

PROJECTS

UMassConnect – Social Media Website (Link) React.js, Redux, Node.js, Express.js, MongoDB, HTML/CSS, MUI, Docker

- Developed a full stack CRUD application for prospective use of 9,000+ students, providing a centralized platform for curating and delivering highly relevant content related to UMass students' academic pursuits, campus events, clubs, and interests.
- Guaranteed secure communication and access by integrating RESTful APIs authenticating JWT tokens sent on each API call.
- Containerized the application and deployed it on Render, resulting in a 40% reduction in deployment time & 99.9% uptime.

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.

Binary Buddy Memory Allocator (Link) C, C++, Makefile, Unix/Linux

- Created a memory allocator for Unix-like operating systems from scratch which made the use of recursive binary splitting and coalescing to achieve a memory allocation efficiency improvement of approx. 25% as compared to traditional methods.
- Designed a Binary Tree ADT and implemented recursive Depth First Search algorithms to locate available memory nodes.
- Improved build processes by incorporating a Makefile for automated compilation and testing, reducing deploy time by 5%.

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 & EXTRACURRICULAR

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

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