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, Kotlin, Bash
Frameworks and Libraries: React.js, Node.js, Flask, Bootstrap, Django, jQuery, Express.js, Mongoose, Pandas, NumPy
Cloud and Tools: Google Cloud, AWS, Microsoft Azure, Terraform, Git, Docker, MongoDB, Unix/Linux, Agile, Postman
Certifications: The Complete Web Development Bootcamp (Udemy), Software Engineering Virtual Experience (JP Morgan)

EXPERIENCE

Adani Group Cloud Engineering Intern May 2023 – Present
- Facilitate seamless migration of Virtual Machines (VMs) from 2 newly acquired companies to Adani's AWS infrastructure.
- 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.
- Develop automation scripts using Terraform to provision Azure VMs, making deployment 50% faster than manual methods.

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 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 Node.js, 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
- Designed an educational game incorporating collaborative learning and developed prototypes using Kotlin for the "WearableLearning" (WL) android mobile app to test its effectiveness for teaching K-12 science through mobile games.
- Conducted an IRB-approved study to collect data on user feedback and presented findings in 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 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.
UMass Residential Life – Peer Mentor – Build inclusive environment for freshmen, aiding academic transition to college.