PRAGATI TOPPO

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EDUCATION

Software Engineering 09/2022 – present
California Polytechnic State University San Luis Obispo,
Expected Graduation: June 2026 United States
Cumulative GPA: 3.0
Relevant Coursework: Data Structures, Project-Based Object Oriented Programming and Design, Intro to Computer Organization, Discrete Structures, Individual Software Design and Development, Design and Analysis of Algorithms

PROFESSIONAL EXPERIENCE

Software Engineer Intern 07/2024 – present
Hexaware Technologies
- Developed a comprehensive shopping cart application using Core Java, Spring Framework, Spring Boot, REST API, MySQL, HTML/CSS, and React.js. Responsibilities included implementing user authentication, product listing, cart management, and order processing features.
- Integrated RESTful APIs, ensured data persistence with MySQL, and created a responsive interface with React.js.
- Conducted unit testing with JUnit to maintain code quality and collaborated with the team to meet business requirements.

Instructional Student Assistant 09/2023 – present
Cal Poly Computer Science and Software Engineering Department
- Provided comprehensive feedback on assignments and lab work, highlighting strengths, identifying areas for improvement, and offering constructive suggestions for Data Structures (CSC 202).
- Assessed and graded weekly homework assignments and projects, ensuring adherence to course guidelines and learning objectives.

Software Lead 11/2023 – present
Team Tech - Society of Women Engineers
- Designed and developed a marketing website using PHP and CSS, focusing on front-end development to effectively showcase our Wheelchair Securement System for the Team Tech Competition sponsored by Boeing at WE24.
- Conducted research and extensive testing to create a Securement System for airplanes, aimed at reducing damage and misplacement of wheelchairs, improving accessibility for wheelchair users in air travel.

SKILLS

Programming Languages
C, Java, Python, C++, Assembly, HTML, JavaScript, TypeScript, Swift, Kotlin, Ruby, PHP, R, MATLAB, Shell Scripting, SQL

Software Tools
Git, Visual Studio Code, Microsoft Excel, Docker, IntelliJ, PyCharm, RISC-V, Figma, MySQL, MongoDB, AWS (Amazon Web Services), JIRA, Postman, Kubernetes

PROJECTS

User Login API with Email and OTP Authentication
Developed using Django REST Framework, PostgreSQL, and Docker
- Developed a secure backend API for user authentication using Django, featuring email-based user registration, OTP generation and verification for login, and session management with secure tokens.
- Implemented rate limiting, encrypted communication, and secure algorithms to enhance security.

Secure Web Server Implementation
In Association with IIT Kanpur
- Designed and deployed two distinct subnets: a DMZ Network (publicly accessible) and a Private Network, ensuring robust security and segregation of public-facing and internal resources.

- Successfully launched and configured a Web Server in the DMZ subnet, making it securely accessible to the public.
- Implemented an RDS Server within the Private subnet, enhancing data security by restricting direct public access and configuring NAT for controlled access.
- Utilized AWS best practices to optimize network performance and maintain high availability.

File System Emulator
Developed with VScode and written in C.
- Developed a custom file system emulator in C using a struct. The program takes command-line arguments specifying the directory name, verifies its existence, and loads the inode list file to initialize emulation.
- Users can navigate directories, list contents, create directories, and create regular files within the system.

A* Pathing
Path Searching Game Simulation
- Developed with IntelliJIDEA and written in Java.
- Utilized streams, lists, priority queues and hash maps to implement A* searching algorithm.
- Used A* algorithm to find the fastest route between the given character's current and final destination and minimising the time it takes to reach it's goal.

Huffman Coding
Developed with PyCharm and written in Python.
- Utilizing binary trees to use the frequency of reoccurring letters of the input string to encode the value by arranging it in terms of its ASCII value.

COURSES

Cloud Computing with AWS 07/2024
Indian Institute of Technology Kanpur
- Completed a comprehensive course on Cloud Computing with AWS, focusing on designing and deploying scalable, secure cloud infrastructures. Gained practical experience in configuring VPCs, subnets, security groups, and launching services such as EC2, RDS, and S3.
- Implemented real-world scenarios, including creating public and private subnets, NAT gateways, and managing access controls.

Statistical Machine Learning 06/2024
Indian Institute Of Technology Bombay
- Completed an intensive course on Statistical Machine Learning, covering data exploration, probability distributions, estimation strategies, hypothesis testing, and advanced regression and classification techniques.
- Gained hands-on experience with R, applying methods to both simulated and real-world datasets.

CLUB INVOLVEMENTS

Society of Women Engineers (SWE), Women Involved in Software and Hardware (WISH), CSAI, Colour Coded, Indian Student Association, South Asian Student Association, Team Tech, Kaja Krew