Abhinav Singh

2A/12 Siddhbali Vihar, Najibabad, Bijnor, 276763, UP, India
+91 79062 15089 | singhabhinav0923@gmail.com
LinkedIn | Portfolio | Github | Leetcode | Geeksforgeeks

Summary

Aspiring Backend Developer with expertise in building secure, scalable applications using Python, Node.js, and AWS. Proficient in developing REST APIs, containerized systems, and real-time applications, with a strong foundation in algorithms and cloud technologies.

Education

Bachelor of Technology (B.Tech) in Electronics and Communication Engineering (ECE)
Govind Ballabh Pant University of Agriculture and Technology, Pantnagar, Uttarakhand
2021-2025 || **CGPA**: 6.1/10

Skills

Programming Languages: C++ (Proficient), Python (Proficient), JavaScript (Intermediate)
Frameworks: Django, Django REST Framework, Express.js, React Native
Tools: VS Code, Git, Postman, Docker, Redis, Unix/linux
Cloud Technologies: AWS (ECS, Lambda, S3, EKS, RDS, ECR, IAM), REST APIs
Soft Skills: Problem-Solving, Team Collaboration, Adaptability

Projects

- **End-to-End Encrypted Chat Application | Github**
  Technologies: WebSocket, Diffie-Hellman, Express, React Native
  Built a secure real-time messaging platform using Diffie-Hellman key exchange for secure encryption protocol. Secure encryption for safe data transmission.
  Implemented WebSocket connections for seamless, low-latency communication between users.
  Designed a scalable backend architecture to support high concurrency.

- **DNS Server Implementation** | **Github**
  Technologies: Python
  Built a fully functional **DNS server** from scratch on the Codecrafters platform.
  Designed the server to handle domain name resolution requests efficiently while adhering to DNS protocols.
  Focused on scalability and performance optimization to support multiple concurrent requests.

- **Vercel Clone** | **Github**
  Technologies: Node.js, AWS ECS, AWS ECR, AWS Lambda, Redis, Docker, AWS S3
  Created a deployment platform for **React** applications, leveraging **Node.js** for backend services and **Docker** for containerization.
  Designed a scalable infrastructure using **AWS ECS**, **AWS ECR**, and **AWS Lambda** for serverless
  Integrated Redis for caching, reducing asset retrieval time by 25%.
  AWS S3 for efficient static asset storage.

Achievements

- **Linux Foundation Certified IT Associate:** Mastered Linux system administration, enabling efficient server management.
- **Goldman Sachs Software Engineering Virtual Experience**: Developed optimized code solutions for real-world scenarios
- Solved 200+ problems on LeetCode, including 50+ medium/hard problems, specializing in algorithms and data structures.

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