Reeshabh Kumar Ranjan

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EXPERIENCE

nsave — Remote (UK based)
Backend Engineer — *March 2023 - Present*

The techstack I work with includes NestJS, Kafka, Docker, AWS and PostgreSQL.
My notable projects/contributions:
- Spearheaded bug fixes and API enhancements to ensure smooth transaction processing.
- Designed and implemented security measures, including 2FA and secure data handling.
- Contributed to system architecture with schema updates and database optimization.
- Collaborated cross-functionally to resolve technical issues and enhance software components.
- Streamlined the onboarding process with location verification and document uploads.
- Built and managed a rules engine to improve system functionality.
- Maintained documentation and supported user interactions for seamless experiences.

MathWorks — Bangalore, India
DevOps Engineer — *April 2022 - March 2023*

The techstack I work with includes Python, Docker, Terraform, Ansible, Hashicorp Vault, CI/CD, etc.
My notable projects/contributions:
- Migrating internal applications from HTTP to HTTPS.
- Setting up Hashicorp Vault for secrets management for apps to be deployed on AWS.
- Developed a containerised tool to setup an environment to configure the internal cloud hosted using OpenStack.

MathWorks — Bangalore, India
EDG Engineer — *July 2021 - March 2022*
- Worked on the backend of developing an internal tool. Tech stack was Express.js and MongoDB.
- Worked in the Linux kernel development domain. I have worked with device drivers, device tree overlay, etc.

Network Security Lab, IIIT-Delhi — Delhi, India
Undergraduate Researcher — *August 2020 - April 2021*

Worked under the guidance of Dr. Sambuddho Chakravarty and Dr. Mukulika Maity. The aim of the project is to detect the presence of VoIP traffic in Tor traffic flows.

MathWorks — Bangalore, India
EDG Intern — *May 2020 - June 2020*

Analysed the performance of MATLAB ® Coder ™ ⬀ for computer-vision algorithms against C++ implementation.

SKILLS SUMMARY

- **Languages**: Python, Typescript, Java, Bash, C++, C
- **DevOps skills**: Docker, Docker Compose, Ansible, Terraform, AWS, GitHub Actions
- **Frameworks**: Django, Django Rest Framework
- **Databases**: PostgreSQL, MongoDB, SQLite, MySQL
- **Soft Skills**: Teamwork, Time Management, Proactiveness, Leadership

POSITIONS OF RESPONSIBILITY

CSE 554: Network and Systems Security — IIIT-Delhi
Teaching Assistant — *January 2021 – May 2021*

My task was to conduct and grade the assignments, quizzes and exams. This included a considerable amount of resolving doubts of the students related to the lab exercises and assignments.

d4rkc0de: Cybersecurity Team of IIIT-Delhi — IIIT-Delhi
Club Member — *July 2020 – May 2021*

I was the part of the organising team of a Capture The Flag event. I wrote a challenge based on the usage of VPN tunnels for the participants. I also gave two talks - web security basics and The Onion Router (ToR).

PROJECTS

- **OffTrade - Fantasy League project (Django)** ⬀:
  Tasks done and tools/technologies used by me:
  - automate infrastructure deployment on a GCP VM using Ansible, GitHub Actions (for CI/CD) and Docker Compose
  - contribute in setting up a staging environment in AWS
  - write secure and robust REST APIs using django-rest-framework and secure websockets (wss://) using django-channels
  - setup a secure payment API using PayU Payment Gateway backend
  - setup a reliable notification system using Google Firebase and django-push-notifications
  - build a secure JWT based authentication supporting Google Sign In, write reliable access control policies using Django's permission system site monitoring using Datadog
  - host all the app secrets (API keys) on an on-prem hosted Hashicorp Vault server
  - configure DNS and DDoS protection using Cloudfare

- **Research Mentoring Platform - Open Source online mentorship webapp (Django)** ⬀:

- ○ I am the founding engineer. I developed for the first release of the backend (in Django). It included an auth system, access control system and the core business logic.
  - ○ I am currently mentoring interns from IIIT-Delhi, India who are working on this project. Tasks include project management, code review, talking with clients on a regular basis etc.
  - ○ Our clients are The Indian National Academy of Engineering ✪ and ACM India ✪.
  - ○ It is under the supervision of the distinguished professor, Dr. Pankaj Jalote.
- **SocPay - Secure social media webapp (Django)** ✪: Developed a social-media website using Django and the Jinja templating engine for a pen-testing attack-defense competition at the end of the course. The webapp focused on secure designed principles, including implementation of OTPs, anti-spam measures, DoS resistance, race condition handling, etc.
- **Academic Portal for IIIT-Delhi, India (Django)**✪: It is a webapp serving the registration of special credits (Self Growth and Community Work) of all the students of IIIT-Delhi, India. The website is actively used by all the students of IIIT-Delhi, India.

Education

- **Indraprastha Institute of Information Technology** Delhi, India, India
  Bachelor of Technology - Information Technology; GPA: 9.01/10 2017 - 2021
  Courses: *Security Engineering, Foundations of Computer Security, Mobile App Development, Software Development using Open Source Technologies, System Management, Operating Systems, Computer Networks, Databases*

Honors and Awards

- Listed in the Dean's List 2020 for scoring 9+ GPA in both the semesters of the 2019-2020 academic year.
- Qualified for Google Code Jam Round 2, 2020
- Gold medal holder in NPTEL's Ethical Hacking course proctored exam.
- Secured the third position in an intra-college cybersecurity competition.