Anvansh Singh

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EXPERIENCE

Software Development Engineer I
June 2024 – Present

Samagra (Governance Consulting Firm)
Remote

- Skills: **Microservices, DevOps, Automation, NestJs**
- Led the design and implementation of **BHASAI**, a microservice-based drag-and-drop interface that reduced chatbot development time from 2 months to just **1 week**. This accelerated AI bot deployment across **5 major communication channels**, leading to a **40%** increase in user engagement.
- Spearheaded the creation of Samagra's virtual assistant, **SamagraBot**, using advanced vector embeddings to automate content retrieval. By integrating with the ZOHO portal, I improved the system's natural language query accuracy from **30%** to **94%** within **1 week**, reducing user support queries by **60%**.
- Collaborated with cross-functional teams to enhance scalability, reliability, and fault tolerance across key AI platforms, contributing to a **15%** reduction in system downtime.

Software Development Engineer Intern
April 2023 – June 2024

Samagra (Governance Consulting Firm)
Remote

- Skills: **Microservices, DevOps, Automation, NestJs**
- Optimized the deployment of the Unified Communication Interface (UCI) by automating the entire microservice architecture deployment process into a single script, reducing deployment time by **40%** and improving system stability. This streamlined the process, enabling over **25 successful deployments** with zero downtime, significantly increasing the team's productivity.
- Enhanced the logging and monitoring capabilities for the **Konnect Agri** project by implementing centralized log management using **ELK Stack**, reducing troubleshooting time by **30%** and improving system uptime by **20%**. This allowed the system to deliver real-time insights to **thousands of farmers**.
- Developed and deployed a robust notification system for **Konnect Agri**, utilizing serverless architecture (**AWS Lambda**) to send region-specific updates and agricultural guidance to over **10,000 farmers**. This improved communication efficiency by **35%** and allowed for greater scalability and cost-effectiveness.
- Led efforts to improve system monitoring by integrating **Prometheus** and **Grafana**, which reduced response times to system alerts by **50%** and improved platform resilience by proactively detecting and resolving issues.
- Contributed to the enhancement of the **Ama Krushi AI** platform by designing and integrating a geolocation analytics module, improving personalized agricultural advice accuracy by **30%**, and delivering enhanced insights to over **50,000 farmers** across diverse regions.
- Collaborated with cross-functional teams to implement **containerization** (Docker) for all services, reducing infrastructure costs by **20%** and improving deployment consistency across different environments.

Software Development Engineer Intern
June 2022 – July 2022

Humming Sparrow Digital Solution Private Limited
Remote

- Skills: **Backend Development, Quality Assurance, Automation**
- Played a key role in the "Utkarsh Bharat" project by maintaining and enhancing backend systems for the Android app and its **10+ subsidiary services**, enabling seamless digital education delivery to over **100,000 students** across India. This improved the system's scalability and ensured uninterrupted learning for students.
- Resolved **18 critical bugs** in the "Safety Alert Service" project, significantly enhancing backend and frontend stability. This resulted in a **15%** increase in service uptime and boosted overall user satisfaction, leading to a smoother and more reliable platform for thousands of users.
- Engineered a QR code-based visitor log management system for the "RWA" project, automating the visitor entry process. This solution reduced manual entry errors by **50%**, eliminated paperwork, and saved an estimated **20 staff hours per week**, streamlining operations for **hundreds of residents** and improving security.
- Optimized the backend system for the QR code-based visitor log by implementing caching strategies, leading to a **25%** reduction in server load and improving the system's overall responsiveness.
- Documented system architecture and backend workflows for future developers, ensuring ease of maintenance and knowledge transfer, which increased development efficiency by **15%**.

Open Source Contributor
Ongoing

Django — Django-Stubs — p5py
Remote

- **Django**: Contributed to the core Django project by adding support for boolean attributes on properties within the admin interface, benefiting developers by simplifying model management and property handling. This enhancement provided more intuitive controls for model administrators and improved the overall user experience. Key contribution: **#17263**.
- **Django-Stubs**: Improved type safety by resolving over **10 bugs**, contributing to a more stable library used by over **11,200 developers**, ensuring reliability for large-scale production systems. Key contributions include: **#1366**, **#1370**, **#1377**, **#1404**, **#1407**, **#1413**, **#1419**, **#1425**, **#1447**.
- **p5py**: Led efforts to optimize continuous integration (CI) workflows, improving development cycles by **25%** and automating routine tasks to increase team productivity. Key contribution: **#412**.

Projects

Aptigrate, | *Python, CLI Development, Linux Systems* April 2023 – Present
- Developed a robust CLI utility to backup and restore apt packages, ensuring system integrity during reinstallation or upgrades.
- Created a comprehensive backup solution that captures the complete list of installed packages, allowing users to quickly restore their environments.

DDeploy | *Bash, Django, Linux Systems* July 2022 – September 2022
- Engineered a server-side script to automate Django app deployment on Linux systems, eliminating manual configurations and reducing deployment time by over 50%.
- Streamlined the deployment process, making it more accessible for developers to manage their apps while enhancing the reliability and consistency of deployments.

Education

KIET Group of Institutions Ghaziabad, India
Bachelor's Degree in Computer Science and Information Technology (GPA: 7.3) *Jul. 2020 – Jul. 2024*
- Coursework: Gained knowledge of machine learning, system design, computer hardware, and applied sciences.

Mary Gardiner Convent School Lucknow, India
Intermediate, Science (Score: 87.7%) *2018 – 2020*
- Subjects: Physics, Chemistry, Mathematics, Physical Education, and English Core.

Lucknow Public School Lucknow, India
High School (Score: 89.7%) *2018*

Volunteering Experience

Djangonaut Fellow and Captain Django Community
September 2023 – Present *Remote*
- Participated as a **Djangonaut Fellow** in an 8-week mentoring program to enhance Django contributions and develop leadership skills.
- Led my team as a **Captain**, promoting collaboration and empowering peers to take on significant roles within the Django community.

Core Lead and Server Administrator Innogeeks - Technical Community
June 2022 – May 2024 *Remote*
- Founded the annual open-source fest, **Innogeeks Winter of Code**, providing a platform for students to showcase talents and collaborate on innovative projects while managing the server infrastructure to ensure seamless operations.
- Mentored over **100 students** in various development domains, fostering collaboration and enhancing their open-source contributions, while also serving as the server administrator for the society to maintain optimal system performance.

Technical Skills

Languages: Bash, SQL (Postgres, MySQL, TimescaleDb), JavaScript, TypeScript, HTML/CSS, YAML
Frameworks: Django, Flask, React, Node.js, NestJS, FastAPI, Express, Material-UI
Developer Tools: Git, Docker, Kubernetes, RabbitMQ, Jenkins, Google Cloud Platform, AWS, PyCharm, IntelliJ, Eclipse, GitHub Actions
Libraries: pandas, NumPy, Matplotlib, Celery, Redis, Django-Stubs, p5py, Prisma
Databases: PostgreSQL, MySQL, MongoDB, TimescaleDb
Other: Microservices Architecture, CI/CD, RESTful APIs, DevOps, System Design, Server Administration