# Deepika Shukla

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**Summary** — Backend Developer with 1+ year of experience building and scaling high-performance systems, APIs, and microservices using Django, DRF, and AWS. Skilled in designing data-intensive applications, optimizing query performance, and integrating intelligent automation

## Skills

- **Programming Languages:** Python, JS(ES6+), SQL
- **Frameworks & Libraries:** Django, Django REST Framework, Flask, ReactJs
- **Database:** DynamoDB, PostgreSQL, MySQL, SQLite
- **Backend:** RESTful APIs, Redis, ORM, JWT
- **DevOps & Tools:** Git/GitHub, Bitbucket, Postman, Docker
- **Cloud & Deployment:** AWS (EC2, S3, CloudWatch)
- **Data & ML Tools:** Jupyter Notebook, Pandas, NumPy, Scikit-learn,

## Experience

**Software Development Engineer (SDE)**                                              **Oct 2024 – Present**
*GeeksforGeeks*

Multi-Organization Analytics Dashboard
- Engineered scalable dashboards for 1M+ students across multiple organizations and courses. Achieved 80% faster load times with query indexing, materialized views, and Redis caching.
- Integrated real-time progress and engagement metrics with role-based access controls.

API Load Reduction and Random Breakdown Optimization
- Reduced API failure rates by 45% during peak contest traffic (50K+ concurrent users) by implementing smart load shedding with randomized throttling.
- Improved API throughput by 3x using CDN caching, async views, and bulk serialization for 15M+ calls/week.

Proctoring Extension and Window Shrink Detection
- Developed a lightweight Chrome extension deployed in 20+ coding contests with 100K+ participants to detect tab-switching, window resizing, and inactivity events.
- Enabled 90% faster flagging of suspicious user behavior using real-time reporting via WebSocket to an admin dashboard.

Scalable Time Complexity Evaluation for Coding Problems
- Leveraged ASG to distribute code execution across worker instances, ensuring optimal CPU utilization and keeping workers consistently busy under variable load.
- Implemented load-aware task scheduling to parallelize test case execution, enabling reliable time complexity measurement independent of traffic spikes.

AI Study Chatbot (EdTech Platform)
- Designed and developed scalable REST APIs to power an AI-driven study chatbot across videos, live classes, and articles, with secure authentication, pagination, and optimized serializers.
- Implemented timestamp-based video sectioning and chunked context retrieval using LangChain and OpenAI APIs for precise, context-aware responses.

**Member of Technical Staff Intern**                                              **June 2023 – June 2024**
*GeeksforGeeks*
- Designed and optimized high-traffic SQL queries in MySQL, reducing load times by 40
- Worked with AWS DynamoDB to implement NoSQL data models and custom indexes, enabling efficient filtering and retrieval of large-scale event logs.
- Automated data ingestion pipelines and implemented pagination, filtering, and sorting mechanisms for REST APIs using DRF and Django ORM.
- Collaborated in Agile environment, participated in sprint planning, code reviews, and integrated version control workflows using Git and Bitbucket.

## Education

**Allenhouse Institute of Technology**                                              **2020 – 2024**
*Bachelor of Technology (CSE with Artificial Intelligence and Machine Learning)*                                              *CGPA: 8.8*

**Intermediate (ISC)**                                              **Percentage: 94%**

**High School (ICSE)**                                              **Percentage: 96%**

**Certifications**
- Microsoft Cognitive Creators – Machine Learning
- Microsoft Cognitive Creators – Django REST Framework