

# SHIVAM GARG

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Final-year Computer Science student (9.2 CGPA) with production engineering experience. Architected scalable backend systems in Go/PostgreSQL and managed GCP deployments at vCommission. Proven track record in database optimization, API design, and AI/ML integration.

## EDUCATION

### Bennett University, Greater Noida

2022 – 2026

B.Tech - Computer Science and Engineering - **CGPA: 9.2/10.0**

## EXPERIENCE

### Amdocs

#### Software Engineer Intern

Jan 2026 - Present

Gurugram, India (Onsite)

- Developing a secure, internal **GenAI analytics tool** for querying sensitive telemetry data, implementing a privacy-first architecture where files are processed locally in temporary storage without external server uploads.
- Leveraging **DuckDB** to generate in-memory virtual tables for efficient data querying, optimizing performance by processing only required fields and eliminating the overhead of full-file RAG pipelines.
- Enabling team members to generate dynamic dashboards, graphs, and reports via natural language prompts; currently containerizing the application with **Docker** and learning **Kubernetes** for deployment.

### vCommission

Aug 2025 - Jan 2026

#### Software Engineer Intern (Full-Stack)

Gurugram, India (Onsite)

- Architected end-to-end system for an affiliate marketing platform, leading a complete migration from Firestore to a normalized **PostgreSQL** schema (15+ tables) with environment-based data isolation (Dev/Staging/Prod).
- Developed 30+ REST API endpoints using **Go (Gin)** with a custom middleware chain (CORS, JWT, RBAC) and OAuth 2.0 integration, achieving a **3x performance improvement** over legacy systems.
- Engineered a batch data processing pipeline with **token-bucket rate limiting** (14 req/sec) to sync 1000+ daily records from external APIs, ensuring system stability and automatic error recovery.
- Built a production-grade admin dashboard using **React/TypeScript**, featuring bulk product uploads, real-time analytics, and optimized component rendering that reduced API data fetching times by 40%.
- Managed DevOps via GCP Cloud Run, implementing zero-downtime CI/CD pipelines; resolved complex merge conflicts and conducted code reviews in a multi-developer Agile environment.

## PROJECTS

### Source Sync - Narrative Analysis Tool | Python, Flask, React, TensorFlow

2025

- Built a full-stack AI analysis tool to identify narrative differences in media using a Python/Flask backend and React/TS frontend.
- Engineered a semantic analysis pipeline: Used **TensorFlow** embeddings and **FAISS** for high-speed similarity search, applying **K-Means** clustering to thematically group unmatched content.
- Integrated **Gemini 1.5 Flash LLM** to analyze thematic clusters and generate structured JSON reports on significant cut content.

### AirLens - Environmental Monitoring Tool | React 19, FastAPI, PostgreSQL, Docker |

2025

- Architected a full-stack platform tracking air quality across 31+ cities, serving real-time data through a **FastAPI** backend.
- Developed an automated **ETL pipeline** using Python/APScheduler to ingest, validate, and transform data from multiple APIs, storing **1000+ records daily** in Supabase PostgreSQL.
- Implemented intelligent caching (1-hour TTL) and rate limiting, reducing API calls by **99%** and cutting load time to 50ms.
- Containerized and deployed the application using **Docker** and Nginx on Render, ensuring 99.9% uptime.

### Deepfake Detection Webapp | PyTorch, ResNeXt-50, LSTM, Flask

2024

- Architected a deepfake detection model using a hybrid **ResNeXt-50** and **LSTM** network, achieving **90% accuracy** on the FaceForensics++ dataset by analyzing spatial and temporal artifacts.
- Designed an informative web platform with **Flask** to educate users on deepfake technology, featuring a live video/image upload for real-time analysis.

## TECHNICAL SKILLS

**Core:** Python, Go (Golang), JavaScript/TypeScript, Java, SQL, Data Structures & Algorithms

**Frameworks:** React 19, Gin, Flask, FastAPI, TensorFlow, PyTorch, Redux, Tailwind CSS, APScheduler

**Databases:** PostgreSQL, Firestore, MongoDB, Supabase, MySQL

**DevOps & Tools:** GCP (Cloud Run), Docker, Git/GitHub, CI/CD, Postman, Linux

## CERTIFICATIONS & ACHIEVEMENTS

- **Publication:** Presented "Hybrid CNN-RNN Deepfake Detection Framework" at ICIVC 2025.
- **Awards:** Dean's List Award (2024–2025) for outstanding academic achievement.
- **Certifications:** Convolutional Neural Networks (Coursera), Google AI Essentials.