

Rahil Shukla

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SUMMARY

Software engineer (MCS @ NCSU, GPA 4.0) with internship experience building Python microservices, real-time WebSocket/WebRTC systems, and GenAI-enabled workflows. Strong in data structures/algorithms, object-oriented design, databases (PostgreSQL/MongoDB), CI/CD, and building scalable, reliable services with measurable latency and throughput outcomes.

TECHNICAL SKILLS

- **Languages:** Python, C++, Go, JavaScript, SQL, Java, NoSQL
- **Backend/Frameworks/Databases:** Django, Node.js, React.js, Express.js, REST APIs, WebSockets, MongoDB, PostgreSQL
- **Cloud/DevOps/Tools:** AWS, GCP, Azure, Docker, Linux, Git, CI/CD (GitHub Actions), Postman, Kubernetes
- **Testing:** PyTest, unit/integration testing, API testing

EXPERIENCE

Cogbee

AI Engineer Intern

May 2025 - Jul 2025

North Carolina, USA

- Designed, built, and shipped Python REST microservices to orchestrate LiveKit WebRTC sessions and LLM prompt-loop dialogues over WebSockets, supporting 30+ concurrent sessions with robust session lifecycle management.
- Integrated OpenAI STT/TTS with asynchronous processing and streaming I/O, achieving sub-second transcription latency and real-time audio synthesis for conversational turn-taking.
- Implemented automated LLM output evaluation (structured Q&A, composite scoring, soft-skill badges), reducing manual review by 60% and standardizing outputs for downstream product/analytics consumption.
- Containerized services with Docker and deployed/managed them on Kubernetes, improving environment consistency and enabling reliable rollouts of backend microservices.

AVI – Web Solutions

Python Intern Developer

Jan 2024 - Jun 2024

Gujarat, India

- Built a multilingual document processing pipeline using Python, Pandoc, and LangChain: file conversion → chunking → embeddings → storage in PostgreSQL to enable fast retrieval for internal users.
- Stored OpenAI embeddings in a PostgreSQL vector database and delivered top-k semantic search in 200ms over 50k+ chunks, improving search relevance and retrieval speed.

Vonly – Data Analytics Solutions

Software Engineer Intern

May 2023 - Jul 2023

Gujarat, India

- Built interactive Redash analytics dashboards for 10+ stakeholders, reducing recurring reporting turnaround from hours to minutes.
- Developed a C# + Python system to map and consolidate metadata entities across platforms, improving ID consistency and reducing duplicate/incorrect mappings by 25%.

DAIICT

Teaching Assistant

Aug 2023 - Jan 2024

Gujarat, India

- Led weekly tutorials/office hours for 120+ students; graded 300+ submissions with a consistent rubric, improving grading consistency and course experience.

EDUCATION

North Carolina State University

Master of Computer Science (GPA: 4.0/4.0)

Aug 2024 - Present

North Carolina, USA

- **Coursework:** Algorithms, Data Structures, Software Engineering, Automated Learning & Data Analysis, DBMS, HCI

DAIICT

Bachelor of Technology (Honors), ICT, Computational Science (GPA: 8.25/10)

Aug 2020 - May 2024

Gandhinagar, India

- **Achievements:** Honors
- **Coursework:** Machine Learning, Cloud Computing, Computer Networks, Data Structures & Algorithms

PROJECTS

WolfJobs | MongoDB, Express.js, React, Node.js, HTML, Docker

Oct 2024

- Deployed a recruiting platform with resume upload, OTP-secured login, automated email notifications, and interview scheduling workflows.
- Implemented OpenAI-powered ATS parsing and JD match scoring; added recruiter filtering/sorting, reducing candidate screening time by 40% in demo user testing.

Plant Disease Classification | CNN, Logistic Regression, Random Forests, KNN, Pytorch, scikit-learn, Tensorflow

Nov 2024

- Trained CNN/ResNet models; improved validation performance via hyperparameter tuning and systematic evaluation.
- Benchmarked deep features vs classical ML baselines to validate robustness and reduce overfitting risk.

Indian Wildlife Database | PostgreSQL, Python, Django, HTML, CSS, Bootstrap

Nov 2022

- Designed and normalized a relational schema in PostgreSQL; documented requirements/constraints in an SRS.
- Built a Django-backed web UI to support CRUD + search workflows for non-technical users.