Shiva Nigam

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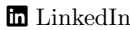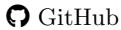
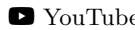in LinkedIn | ⚙ GitHub | Leetcode | Hackerrank | ▶ YouTube

EDUCATION

Harcourt Butler Technical University (Formerly HBTI) — Kanpur, Uttar Pradesh
B.Tech in Electrical Engineering — Dec 2021 – June 2025

EXPERIENCE

Rebhu Computing (IIT—Roorkee GNEC) — September 2025 – Present
Software Engineer — Computer Vision & LiDAR Mapping — Noida, Uttar Pradesh

- Built a real-time object tracking module in **Python/OpenCV** using **Lucas–Kanade Optical Flow**; supports **click-to-track** interaction—tap a moving target and a tracking circle follows it frame-by-frame in live video.
- Developed an interactive mouse-driven targeting system for live camera feeds; added utilities for **grayscale conversion**, **image rotation**, and combined **color + grayscale** rendering in a single window for debugging and demos.
- Deployed modules on **Raspberry Pi 5**: implemented a camera calibration script (capturing 20 FPS frame sets) and built an **ArUco-based autonomous landing workflow**—drone detects a marker and triggers precise landing on the calibrated pad.
- Engineered LiDAR mapping pipelines to ingest rotating LiDAR streams, transform them into **3D point clouds**, and generate **2D canvas projections** for visualization—forming the foundation for SLAM-ready environment perception.

uFony Services Pvt. Ltd. — June 2025 – August 2025
Software Engineering Intern (React + ASP.NET) — Pune, Maharashtra

- Integrated **RFID feature** into the student admission workflow using **ASP.NET MVC** and **SQL Server**.
- Modified **ViewModels**, **Controllers**, and **DB commands** for end-to-end data flow using **C#** and **Entity Framework**.

Toast Studios — Feb 2025 – June 2025
Software Development Intern (React.js + Node.js) — Bangalore, Karnataka

- Built a **Customer Support platform** handling **1K+ weekly player queries**, integrating **AWS Athena** with **React.js + Node.js** for instant gameplay data retrieval.
- Launched a real-time dashboard for **revenue, retention, and user activity** across 3+ live games, with currency-aware filters and lobby-specific insights.
- Enhanced **UX with timescale filters and date pickers**, boosting dashboard responsiveness by **25%**.
- Implemented **match-level log tracing** (card events, scores, turns) enabling agents to resolve issues in seconds.
- Reduced API overhead by **3x** using **React Hooks** and optimized frontend state management.
- Collaborated with backend teams to refine Athena query filters for accurate **GMV** and **margin metrics**.

TECHNICAL SKILLS

Languages: Python, JavaScript (ES6+), TypeScript, Java, SQL, C/C++, C#, HTML/CSS
Frontend: React.js, Vue.js, Material-UI, TailwindCSS, Chart.js, Context API, Hooks
Backend / Frameworks: Node.js (Express), FastAPI, ASP.NET MVC, REST & GraphQL APIs, Microservices Architecture
Databases / Messaging: PostgreSQL, MongoDB, Redis, Kafka, SQL Server, Vector DBs (Pinecone, ChromaDB)
Cloud / DevOps: AWS (Athena, Lambda, EC2, S3), Google Cloud Platform, Docker, GitHub Actions, CI/CD Pipelines
AI / Analytics: LLMs, LangChain, RAG, Prompt Engineering, AWS Athena, Metabase, Mixpanel, Data Modeling, Observability

PROJECTS

ZwiggyGo — Full Stack Food Delivery Platform | GitHub   Live Demo

- Engineered a full-stack **food delivery web app** using **React.js (frontend)** and **Node.js + Express (backend)** with **MongoDB Atlas** as the cloud database.
- Designed a scalable data model in **MongoDB Atlas** with optimized indexes for fast menu and order lookups.
- Enhanced frontend performance using **React Router**, **lazy loading**, and **skeleton loaders**, improving time-to-interactive by **40%**.

DocTalks — AI-Powered PDF QA System | GitHub

- Built an end-to-end **RAG-based document question–answering system** using **LangChain**, **ChromaDB (vector DB)**, and **Transformers**.
- Developed an intuitive **drag-and-drop interface** in React.js—users upload PDF files and ask questions directly through a clean chat-style UI.
- Implemented text chunking, embedding generation, vector storage, and **semantic similarity search** to retrieve the most relevant PDF sections.
- Created a scalable backend using **FastAPI** to orchestrate ingestion, vector search, and LLM responses powered by the **Gemini API**.

ACHIEVEMENTS

* **Solved over 800 problems on LeetCode**, ranking in the **top 5%** of all users globally.
* **Authored and published LeetCode editorials**, garnering **80,000+ views** and achieving a reputation score exceeding **600**.
* Cleared **Oracle Cloud Infrastructure 2024 Generative AI Professional** certification with **87.5%**. **View Certification**