

# Kalpana Bhaskar

[kalpana.bhaskar.v@gmail.com](mailto:kalpana.bhaskar.v@gmail.com) | [linkedin.com/in/kalpana-b](https://linkedin.com/in/kalpana-b) | [github.com/KalpanaBhaskar](https://github.com/KalpanaBhaskar) | +91 7397492723

*Aspiring AI/ML Engineer — Engineering scalable data science systems, delivering high-impact projects across Agentic AI, Machine Learning, and LLMs — Competitive Programmer & Emerging Open Source Contributor*

## EDUCATION

|                                                                                                                                                                                                                                                                               |                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|
| <b>Shiv Nadar University Chennai</b><br><i>B.Tech in Artificial Intelligence and Data Science; CGPA: 8.77</i> <ul style="list-style-type: none"><li>AWS Student Builder Group Leader   ML - Vertical Junior Core, Coding Club   POC, Science Club   NSO club member</li></ul> | Chennai, Tamil Nadu<br>08/2024 - Present |
| <b>PSBB Senior Secondary School</b><br><i>CBSE Class XII (Computer Science, PCM, English): 95.2%, CBSE Class X: 97%</i>                                                                                                                                                       | Chennai, Tamil Nadu<br>06/2012 - 05/2024 |

## EXPERIENCE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>Software Engineering Intern at Experiqs</b> : <a href="https://weatherex.ai">Weatherex.ai</a>   <i>Python, Scikit-Learn, TileDB</i>                                                                                                                                                                                                                                                                                                                         | 05/2026 - 07/2026 |
| <ul style="list-style-type: none"><li><b>Retrieved third-party data ingestion</b> for the Weatherex API, optimizing download time by 50% using Dask task graphs and reducing storage by 70% in TileDB with Zstd compression. API tested using Postman.</li><li><b>Engineered a live weather alerts dashboard</b> backed by the Weatherex API, applying statistical bias correction to ensure seamless data consistency with historical site records.</li></ul> |                   |

## PROJECTS

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| <b>UIDAI Intelligent Policy Dashboard - UIDAI Hackathon</b>   <i>Python, Scikit-Learn, Dash</i>                                                                                                                                                                                                                                                                                                                                                                                                       | 01/2026 - 01/2026 |
| <ul style="list-style-type: none"><li><b>Accelerated data processing</b>, saving 30 hours/week, by implementing a Velocity Governance ETL pipeline with automated data cleaning, parsing 232,000+ unified [Aadhaar Redacted] logs into an intelligent dashboard.</li><li><b>Eliminated manual demographic analysis</b>, by implementing K-Means clustering, visualized using maps, and linear regression forecasting to generate Priority Intervention Lists for high-risk migration zones.</li></ul> |                   |
| <b>Drishti - AI-Powered Crowd Safety App - GDG Hackathon</b>   <i>OpenCV, MediaPipe, Firebase</i>                                                                                                                                                                                                                                                                                                                                                                                                     | 12/2025 - 12/2025 |
| <ul style="list-style-type: none"><li><b>Implemented a client-side computer vision pipeline</b> utilizing OpenCV for video frame extraction and MediaPipe for real-time crowd density counting (MAPE under 20%) and bottleneck prediction.</li><li><b>Designed a multi-modal situational awareness agent</b> that processes critical frames through Google Gemini 1.5 Flash for anomaly detection, integrating Firebase for secure user authentication and event data logging.</li></ul>              |                   |
| <b>Safety First Tourism App (Smart India Hackathon 2025)</b><br><i>React, Express.js, OpenStreetMap API, SQLite</i>                                                                                                                                                                                                                                                                                                                                                                                   | 09/2025 - 10/2025 |
| <ul style="list-style-type: none"><li><b>Developed a full-stack tracking platform</b> featuring reliable anomaly flagging, real-time traveler monitoring via OpenStreetMap, and geo-fencing to secure user journeys through dynamic safety scores.</li><li><b>Built a risk-aware itinerary planner</b> that guarantees consistent data querying, architected a self-curated SQLite database of 250 mapped Indian locations for secure and customized travel routing.</li></ul>                        |                   |
| <b>Intelligent QnA System (Bajaj HackRx 6.0)</b> <i>Python, FastAPI, Gemini API, FAISS, NER</i>                                                                                                                                                                                                                                                                                                                                                                                                       | 06/2025 - 07/2025 |
| <ul style="list-style-type: none"><li><b>Engineered a FastAPI Retrieval-Augmented Generation (RAG) pipeline</b>, integrating vector chunking and Named Entity Recognition (NER) to process and index unstructured insurance documents up to 30 pages long.</li><li><b>Reduced natural language query response times by 40%</b> by architecting an efficient FAISS vector search system, utilizing the Gemini API to synthesize top-k retrieved chunks into precise, context-aware answers.</li></ul>  |                   |

## TECHNICAL SKILLS

**Languages:** Python, Java, C++, JavaScript, Typescript, C **Database:** MySQL, PostgreSQL, MongoDB  
**Frameworks/Libraries:** React, Node.js, Next.js, FastAPI, LangChain, Pandas, PyTorch, Scikit-learn, NumPy  
**Cloud & Tools:** Google Cloud Platform (GCP), Git/GitHub, Docker, Firebase, Mediapipe, Postman, Google Gemini API, Sarvam AI API, Excel, Tableau, Hugging Face  
**Concepts:** Data Science (Platform : Kaggle), Machine Learning, AI search Algorithms, Full Stack Web Development, RESTful APIs, Data Structures & Algorithms (Platform :LeetCode 200+ problems solved) , Object Oriented Programming, Operating Systems, Database Management, Computer Networks, RAG

## ACHIEVEMENTS & CERTIFICATIONS

**Unisys Innovation Program 17:** Top 60 out of 3000+ teams for Federated Agentic Fraud Detection System (06/2026)  
**HackerRank Orchestrate:** Participant & Project Contributor (06/2026).  
**Kaggle 5-Day Agentic AI Intensive with Google:** Completed Smart Customer Analytics Capstone Project (11/2025).  
**IBM (via EduNet - AICTE):** AI and Cloud Internship (Certificate) (09/2025 - 10/2025)  
**GEAR Google Career Launchpad:** Ongoing | **Google Skills Boost:** AI & ML courses (Cert) | (Profile)  
**Microsoft Learn:** Profile | **IBM:** AI (Cert)  
**NPTEL Elite+ Silver:** Modern C++ (04/25) | Java (11/25) | Ethical Hacking (10/25)  
**GuideWire Hackathon:** Developed an automated insurance platform for gig workers by reducing fraud by 50% (04/2026)  
**ICSC Qualifier:** Qualified for International Computer Science Competition (ICSC). (09/2025)