Astha Bhaskar

+91 9810971443 | asthabhaskar30@gmail.com | linkedin/astha | github/AsthaBhaskar

Education

Indira Gandhi Delhi Technical University for Women — Delhi
Bachelor of Computer Science Engineering and Artificial Intelligence – CGPA: 7.7 — *Sept. 2021 – July 2025*

Vivekanand School — Anand Vihar, Delhi
Senior High School – 12th Percentage: 87.6% — *2019 – 2021*

Experience

AI System Engineer Intern — Feb 2025 – August 2025
Insight Labs AI — *Remote*

- Built an automated **Twitter Post, Search & Reply Bot** using **n8n, Grok3, OpenAI embeddings, and Supabase**, enabling real-time engagement and growth in social presence
- Developed a **server-side dynamic dashboard** powered by live API data with **MERN stack**, providing **real-time analytics and interactive visualizations**.
- Designed and deployed an **AI chatbot** with a **customized personality** using **Google ADK, AWS Strands, and Grok4 LLM**, tailored for **domain-specific conversational experiences**
- Created a **crypto-oriented, voice-based conversational AI assistant** leveraging **Supabase realtime data feeds, ElevenLabs voice synthesis, and MERN**, offering natural, voice-driven insights and interactions

GenAI Summer Intern — May 2024 – August 2024
Ernst & Young (EY) — *New Delhi, India*

- Developed a **Retrieval-Augmented Generation (RAG) application** for **Maritime Legal Compliance**, improving legal research efficiency and compliance.
- **Fine-tuned** the **LLaMA3.1** model with specialized **legal datasets**, integrated **unsupervised learning** techniques **(LoRA embeddings, Gradio)** to enhance legal advice generation.
- Achieved a **92.62 ROUGE score** for rapid retrieval of relevant legal information, empowering legal practitioners in **navigating complex maritime regulations**.
- Designed an AI-powered **Fuel Management and Route Optimization System for tugboats** using machine learning models to **predict fuel consumption and optimize routes**.
- Achieved a **0.9938 R^2 score** with **Grid Search Gradient Boosting Regressor** and **Simulated Annealing Algorithm**, reducing fuel costs and optimising routes by **20%**.

Machine Learning Intern — Jan. 2024 – May 2024
Ignitus — *Remote*

- Developed a **text generation model** using **NLP Markov chains** on diverse datasets, enhancing creative text generation and **automated content creation**.
- **Conducted research** optimizing the model for MOOC courses, contributing to **innovative educational content generation**.

Summer Intern — June 2023 – July 2023
National Capital Region Transport Corporation (NCRTC) — *New Delhi, India*

- Designed and implemented an AI-powered **Vehicle Detection and License Plate Recognition System** using **YOLOv8, OCR** and **deepSORT**, achieving high accuracy in real-time vehicle detection.
- Conducted research and developed a **face detection model** for **HoloLens-2**, optimizing accuracy and efficiency for enhanced user experiences.

Projects

Kaptur: Full-Stack Social Media App | —***MERN, TailwindCSS, JWT, Cloudinary, Vercel, Render***

- Built and deployed a full-stack social media application using **MERN stack**, featuring **secure JWT authentication**, post creation, likes, comments and follow/unfollow functionality.
- **Integrated Cloudinary** for media storage and deployed on **Vercel (frontend) & Render (backend)**, delivering a fully functional, **production-ready platform** with **responsive UI**

AI-Driven Resume and Job Alignment System | —***Gemini 1.5 Flash, Streamlit, Langchain, PDF2Image***

- Developed a **resume analysis application** using Google Generative AI **(Gemini 1.5 Flash) API**, providing **personalized ATS and HR feedback**, identifying missing kewords and provides **personalized advice**.
- Built a user-friendly **React web application** interface for seamless user interaction.

Early PCOS detection using advance ML | —***ADASYN, Chi-square, XGBoost***

- Led a PCOS diagnosis project achieving **96.02% accuracy** by integrating and optimizing machine learning algorithms **(Random Forest, XGBoost, SVM)** with **data balancing techniques** (ADASYN, SMOTE) and **feature selection methods** (chi-square, RFE).
- **Proposed model** uses a combination which addressed **data imbalance using ADASYN** and **feature selection with Chi-square** and utilized **XGBoost** for effective classification and diagnosis of PCOS.

Publications

Conversational Ai: A Treatise About Vying Chatbots : Published in ICDT-2024, IEEE Publication, GLBITM

Automatic Credit Card Approval Prediction System : Published in ICCCN-2022, Manchester Metropolitan University

Predict Pawpularity Score of Pets using State-of-the-Art Algorithms : Published in InCITe-2023, Amity University

Technical Skills

Languages: Java, Python, SQL
Libraries & Frameworks: React, Tailwind CSS, TensorFlow, Keras, PyTorch, Scikit-learn, Streamlit, Pandas, NumPy, Matplotlib, Hugging Face
AI Techniques: Generative AI (LLMs, RAG, Embeddings, Fine-tuning), Deep learning , NLP, Computer Vision, Supervised Learning, Unsupervised Learning
Tools and Platforms: n8n, Supabase, AWS Strands, Google ADK, ElevenLabs, Grok (3 & 4), LangChain, Azure ML Studio, Gradio