

# Bhavya Pratap Singh Tomar

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## EXPERIENCE

### AI Development Intern

Nov 2024 – Jan 2025

*Seequenze Technologies*

*Noida, U.P.*

- Engineered an advanced **LLM-based code refactoring system** handling **200K+ tokens**, utilizing custom **prompt engineering** and **AST-level analysis** to bypass context window limits while preserving context integrity.
- Developed an intelligent **code transformation pipeline** using advanced **prompting techniques** to convert static layouts into **responsive designs** and inline CSS to **Tailwind CSS**, serving **1,000+ business clients**.
- Developed a robust **FastAPI backend** supporting **10K+ concurrent users** for LLM-based code refactoring.

### Artificial Intelligence Intern

Sept 2024 – Nov 2024

*FoodNEST(S)*

*Lucknow, U.P.*

- Developed and deployed a custom in-house **multilingual, multimodal AI chatbot**, automating order processing for **2M+ stakeholders** in the food delivery supply chain, **reducing manual management overhead by 30%**.
- Devised a **multilingual architecture** outperforming existing models, responding effectively in **22+ Indic languages**.
- Architected **distributed web/map/video scrapers** using **Python** and containerized using **Docker** on **EC2**, enabling automated data collection from e-commerce platforms with **98% uptime**.
- Built a scalable **RAG application** with **LlamaIndex**, implementing custom **indexing, chunking, and routing** utilizing **chain of prompting strategies** to support **500K+ clients**.

## PROJECTS

### YouStock | *Python, Streamlit, Prophet, pandas, numpy, transformers, matplotlib, plotly, replicate, cufflinks.*

- Developed **trading strategies** and evaluated market dynamics, improving existing solutions and insights by **15%**.
- Integrated **sentiment analysis** with financial metrics, predicting **bullish or bearish market trends**.
- Developed **personalized investment insights** system using data-driven strategies.

### Low-latency AI Voice Assistant | *Whisper, Edge-TTS, Hugging Face, VAD, Streamlit*

- Built **end-to-end voice assistant pipeline** with **sub-500ms latency** using **faster-whisper STT**, **HuggingFace LLM**, and **Edge-TTS synthesis**.
- Implemented **Voice Activity Detection (VAD)** with threshold classification and tunable parameters for pitch, voice type, and speed.

### FlowSync | *React, Next.js, opBNB, BNB Greenfield, Gmail API, Smart Contracts*

- Developed **unified productivity platform** integrating Gmail, Slack, Teams, and WhatsApp with **AI-powered message prioritization** and task extraction.
- Implemented **blockchain transparency** using **opBNB smart contracts** for AI decision logging and seamless integration with productivity tools (Asana, Trello, JIRA).

## TECHNICAL SKILLS

Languages: Python, C++, JavaScript, SQL, Solidity, Linux(Bash)

AI & Machine Learning: LLMs, RAG, Fine-tuning (SFT, GRPO), Prompt Engineering, Transformers, Deep Learning (CNN, RNN), NLP

Frameworks & Libraries: PyTorch, TensorFlow, Hugging Face, LangChain, LlamaIndex, Scikit-learn, Pandas, NumPy

Cloud & DevOps: AWS (EC2, S3, SageMaker, IAM), GCP (Compute Engine, Vertex AI), IBM Watsonx, Docker

Databases: Vector (Pinecone, ChromaDB, Weaviate), NoSQL (MongoDB, Neo4j), SQL (SQLite, PostgreSQL)

Web Development: FastAPI, MERN (MongoDB, Express, React, Node.js), ThirdWeb, Streamlit

Certifications: Coursera: ML Specialization (Stanford); NLP Specialization (Deeplearning.io)

## ACHIEVEMENTS

- Intel - National Winner — Top 12/4K+ in **AI Hackathon**; won **25k Rs** for building **Agentic AI using OPEA™** 2025
- Hackodisha 5.0 - National Winner — Won **\$170** for Best AI Project among 6,000+ participants for **Neon-Canvanies** 2025
- Google Cloud Agentic AI Day - National Finalist — Among 59000+ at BIEC for **Farmers Agentic Solution** 2025
- AMD - National Top 10 — Among 3K+ registrations in **AI Sprint** for **finetuning Llama & Qwen models** 2025
- BNB Chain - National Runner-up — Out of 2K+ at IIT Delhi; won **9k Rs** for an **AI tool on blockchain** 2025
- Orange Vibe Jam - Bounty Winner — Int'l 15th/2K+ registrants; won **\$121** for deploying a **blockchain game** 2025
- Mercer | Mettl - Top 50 — Among 3K+ in AI Arena 2.0 for a **GenAI personalized retail chatbot** 2023
- Wells Fargo - National Finalist — Among 890+ at IIT Madras for **crack detection software** 2023

## EDUCATION

Madhav Institute of Technology and Science

Gwalior, MP

*Bachelor of Technology in Artificial Intelligence and Machine Learning*

*May 2022 – Present*