Bhavya Pratap Singh Tomar

+917974559903 | bhavyapratapsinghtomar@gmail.com | LinkedIn | Github

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 an in-house **multilingual, multimodal AI chatbot** using **Watsonx Granite models** and **FastAPI**, automating order processing for **2M+ stakeholders** and reducing manual overhead by **30%**.
- Devised a **multilingual architecture** across **22+ Indic languages**, improving intent accuracy and customer satisfaction.
- Architected distributed **web/map/video scrapers** with **Python, Docker, and EC2**, ensuring **98% uptime** and secure hybrid-cloud data ingestion for analytics pipelines.
- Built a scalable **RAG application** using **LlamaIndex** and prompt chaining, integrating **Watsonx.ai APIs** for governance-compliant model monitoring and supporting **500K+ clients**.

PROJECTS

CQ Lite | *LangGraph, FastAPI, Gemini, AST, Bandit, ChromaDB, Python* — **Live Analyzer**
- Orchestrated a **multi-agent workflow** using **LangGraph** for conditional routing between file discovery, static analysis (**AST**, **Bandit**), and **Gemini**-powered review agents.
- Deployed as a **FastAPI** service, enabling a **ChromaDB**-powered Q&A system with live repository/PR review analysis.

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** using threshold-based classification with tunable pitch and speech-rate parameters

NoPing | *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++, Java, JavaScript, SQL, Solidity, Linux (Bash)
AI & Machine Learning: LLMs, RAG, Fine-tuning (SFT, GRPO), Prompt Engineering, Transformers, Deep Learning (CNN, RNN), NLP, GenAI (Granite Models), AgentOps
Frameworks & Libraries: PyTorch, TensorFlow, Hugging Face, LangChain, LangGraph
Cloud & DevOps: IBM Watsonx.ai (Governance & Orchestration), Azure AI, AWS (EC2, S3, IAM), Docker
Databases: Vector (Pinecone, ChromaDB, Weaviate), NoSQL (MongoDB, Neo4j), SQL (SQLite, PostgreSQL)
Web Development: FastAPI, MERN (MongoDB, Express, React, Node.js), ThirdWeb, RESTful APIs
Specialized Areas: AI Governance, Ethical AI, MLOps (CI/CD), Model Monitoring
Certifications: Coursera: ML Specialization (Stanford); NLP Specialization (DeepLearning.AI)

ACHIEVEMENTS

- **Amazon - National Top 25** — Ranked **23/83K+** in ML Challenge for a **Two-Tower DL model** on product pricing 2025
- **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 Instute of Technology and Science — Gwalior, MP
*Bachelor of Technology in **Artificial Intelligence and Machine Learning*** — *May 2022 – Present*