GAGAN SINGHAL

Boston, MA, 02446 | +1 (857)340-1186

Linkedin.com/in/gagansinghal06 | Gagansinghal06@gmail.com | github.com/sky1502

PROFESSIONAL SUMMARY

AI builder and storyteller at **Boston University**, blending code, creativity, and curiosity to craft meaningful AI systems. Skilled in **Python, PyTorch, TensorFlow**, and have worked with transformers, vision models, and data-driven systems. With **4 years** of experience across analytics, research, and experimentation, I'm chasing **2026 full-time** roles in AI/ML dev or research. Let's build something intelligent that learns — and lasts.

EDUCATION

Boston University, Massachusetts, USA   *September, 2024 - December, 2025*
M.S. in Artificial Intelligence   *GPA: 3.87/4*
Thapar University Punjab, India   *July, 2018 - June, 2022*
Bachelor's in Computer Science   *GPA: 8.97/10*

SKILLS

Programming Languages: Python, Java, C++, SQL, JavaScript
Frameworks/Libraries: PyTorch, TensorFlow, HuggingFace, Scikit-learn, OpenCV, NumPy, Pandas, Tableau, Node.js
Core AI/ML Skills: Multi-Modal ML, LangChain, LangGraph, RAG, Computer Vision, NLP, Transformers, LLM Fine-tuning
Engineering Skills: Git, Oracle DB, REST APIs, Cloud Deployment, Agile Development
Soft Skills: Teamwork, Troubleshooting, Clear Communication, Strategic Thinking, Pressure Resilience

EXPERIENCE

Oracle Corporation - Software Developer I   Aug, 2022 - Nov, 2023
- **Led a team of 3** to spearhead R&D initiatives embedding machine learning into **enterprise-grade forecasting, profit optimization, and analytics workflows**.
- Developed **Java-based automation frameworks**, saving time of development cycles by **3–5 man days** through intelligent testing.

Oracle Corporation - Software Developer Intern   Jan, 2022 - Jul, 2022
- **Owned** and built **ML-driven analytics foundations** for enterprise software.
- Architected distributed-performance monitoring with **Zipkin, Prometheus, and Java EE**.

PROJECTS

AlphaBeat - Music Generation using AI (PyTorch, Latent Diffusion, AR Transformers)   Feb, 2025 - May, 2025
- Designed and benchmarked **8 hybrid pipelines** combining **transformer and latent diffusion models** to enhance **text-to-music generation using melody conditioning**.
- Demonstrated that cascaded architectures significantly improve both **semantic alignment (CLAP↑ 0.35) and audio fidelity (FAD↓ 6.55)** over standalone baselines, with results validated via listening tests and quantitative metrics.

Data-Driven Transit Analysis & Forecasting (Pandas, Plotly, XGBoost, Random Forest)   Mar, 2025 - April, 2025
- Conducted in-depth data analysis on **8 years of MBTA bus system data (2015–2024)** to evaluate **ridership trends, service reliability, and transit equity**.
- Integrated machine learning models **(XGBoost, Random Forest)** for predicting bus on-time performance and ridership volume, enabling targeted scheduling improvements.
- Created **interactive visualizations** to communicate **actionable insights and presented data-driven policy recommendations**.

Sign Language Translation (PyTorch, DenseNet, LSTM)   Oct, 2024 - Dec, 2024
- Built **real-time translation system** for sign language using **DenseNet + LSTM** for spatio-temporal feature modeling.
- Trained on **WLASL dataset**; achieved high-accuracy gesture-to-text translation with optimized preprocessing and augmentation.

Notable Mentions   2021
- **Drowsiness Detection System (DLib, CNN)** (Apr'21)   **NLP COVID Information Tool (Transformers)** (Jan'21 - Mar'21)

CERTIFICATIONS

Tensorflow Specialization   **Applied Machine Learning**   **Data Science Fundamentals**