Nishant Sharma

AI Engineer

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WORK EXPERIENCE

Eigenfrequency Technologies | **Co-Founder**   *Dec 2023 – Mar 2025*

- Scaled AI startup to **$250K ARR** by developing proprietary AutoLLM technology with advanced RAG architectures, driving enterprise adoption. *Advised by leaders from PNC Bank & Aptivaa Global.*
- Engineered specialized hybrid, contextual, and agentic RAG pipelines for **Mizuho Bank**, achieving **97.3% accuracy** across **100,000+** financial documents.
- Developed state-of-the-art on-premise **AI Agents** with **hierarchical planning and memory mechanisms** to extract multi-lingual judgments & analyze defects for the **Supreme Court of India**.

PanScience Innovations | **AI Engineer Intern**   *Jun 2023 – Nov 2023*

- Developed an MRM System for automated credit underwriting, integrating LLMs to generate model documents, integrating glossary and thresholds in **Weaviate** reducing report generation time by **90%**.
- Deployed Llama-2 on-premise using vLLM for distributed inference optimization and **Ray Serve** for production serving, implementing tensor parallelism and **continuous batching** strategies.

Complex Systems and Neural Dynamics Lab | **Research Intern**   *Aug 2023 – Oct 2023*

- Demonstrated that selective pruning enhances transient explosive synchronization in a resource-constrained model. Accelerated testing of seizures by **100x** using CUDA.

EDUCATION

Indian Institute of Technology Delhi , B.Tech in Engineering Physics, CGPA: 7.377/10   *2020 – 2024*

Relevant Coursework: Online Convex Optimisation, Data Structures & Algorithms, Signals & Systems, Linear Algebra & Differential Equations, Calculus, Discrete Math, Differential Geometry, Group Theory, Cryptography.

Tagore International School , Senior Secondary, Grades: 95.8% (12th), 96.4% (10th)   *2018 – 2020*

TECHNICAL SKILLS

ML & AI: PyTorch, Transformers, Llama Index, Langchain, Chroma, FAISS, Rayserve, Huggingface, Autotrain
Programming: Python, C, R, JAVA, Ruby, Git, Docker, Kubernetes, AWS (Bedrock, S3, SageMaker, EC2), Azure

PROJECTS

Multi-Modal LLMs for Protein Function Prediction, *UC San Diego*   *Jan 2025 – present*

- Pioneered functional and structured encoding schemes for histone-modification representations . Trained **LLM heads on 1M RNA sequences**, achieving **96.3%** interaction prediction accuracy with **RNA-FM & ESM**.
- Created an exhaustive benchmark across 13 different structure & function prediction tasks, using multi-modal models **RNABERT, Evo-2, and Blip-2**, to identify the optimal encoding and training tasks.

Neural Network Weights Generation using Diffusion, *Purdue University*   *Nov 2024 – Jan 2025*

- Integrated **CLIP-based** features with **Set Transformer** modules to model and reconstruct pre-trained network weights. Achieved **faster convergence** compared to conventional initializations.

Real-Time Human-AI Interaction, *Research Project with CTO, Accern*   *Nov 2023 – Jan 2024*

- Modeled an **Autonomous Cognitive Entity (ACE)** framework to model human-human interaction. Investigated **multimodal data signals (e.g., text, audio, or biometric cues)** to refine emotional context and improve response accuracy. Sold a working prototype to NextBot.

ACHIEVEMENTS

Selected for the **NVIDIA Inception Program**, a highly selective AI accelerator. Received **$125k** creds	2024
Chosen for the **NASSCOM GenAI Cohort**, ranked among the top **15 Deep-Tech startups** in India	2024
Start-up Mentor in **Samsung R&D** *Solve for Tomorrow* program; team **qualified as Top 10** finalists	2023
Achieved a **99.15 percentile** in **JEE Advanced**, & a **99.58 percentile** in **JEE Main** among 1.2M+ candidates	2020
BVN-IAPT Award, securing **2nd Runner-up** at the NAEST Conference organized by Dr. HC Verma	2019