SHAURYASIKT JENA

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WORK EXPERIENCE

Newcortex LLC | **Machine Learning Engineer** Aug 2024-Present

· Development and deployment of **Agentic AI** for quant backtesting via natural language with feedback
· Built **LangSmith** LLM-as-judge evaluations to quantify and improve per-agent and workflow reliability
· Integrated foundation models **(GPT, Gemini, Claude)** through secure API layers protecting confidential data
· Secured end-to-end pipeline using **GCP (Firebase, Cloud Run)**. Dockerized services for scalable inference
· Built monitoring dashboards for request latency and token-cost usage; reduced average per-request cost by 20%

EDUCATION

University of Southern California Aug 2022-May 2024

MS Computer Engineering – **GPA: 3.9/4.0**
· *Research Assistant, DILL Lab:* Fine-tuned LLaMA and LLaVA for multimodal RAG copilot enabling robust vision-text grounding for low-resource scientific workflows in research labs

Indian Institute of Technology (IIT), Delhi Jul 2018-May 2022

BTech Electrical Engineering – **GPA: 8.5/10.0**
· Specialization in Cognitive And Intelligent Systems (C & IS) – **SGPA: 9.0/10.0**
· *Teaching Assistant:* For graduate courses – *Advanced Machine Learning*, *Unsupervised and Generative ML*

SKILLS

Languages	:Python, C++, C, Java, CUDA, Bash, R, MATLAB, HTML, CSS, SQL
Frameworks/Tools	:Git, PyTorch, TensorFlow, JAX, HuggingFace, Kubernetes, Docker, Airflow, AWS, GCP
MLE Ops	:Deployment (GCP Cloud Run/AWS ECS), CI/CD, Monitoring (Prometheus), DVC
Core Areas	:Machine Learning, Deep Learning, Reinforcement Learning, Natural Language Processing, Computer Vision, Parallel & Distributed CPU/GPU computing

INTERNSHIPS

Big Vision LLC | **Applied Research Intern** | **San Diego** May 2023-Aug 2023

· Fine-tuned on **PaddleOCR** to >99% English accuracy, 15% better digitization of handwritten sports strategies
· Pioneered **fine-tuning** of PaddleStructure for machine-readability of text structures, reaching 90% accuracy

Clemson University | **Research Intern** | **Remote** May 2021-Jan 2022

· Trained **LSTM** model to estimate soil moisture at multiple depths in parallel, reducing RMSE loss to <4%
· Extrapolated moisture data to generate gradient maps, research contributed to 2% less irrigation consumption

Torch Investment Group | **Quantitative Research Intern** | **Singapore** Jun 2021-Oct 2021

· Refined **LGBM**, **RNN** models to predict annual stock returns, surpassing previous model performance by ∼5%
· Formulated CAGR-based investment algorithm, yielded ∼10% increased annual returns for over 30 clients

PROJECTS

Data-to-Text Generation with Minimal Supervision

· **Unsupervised cycle-training** of **LLM**s initialized with 100 supervised samples for data-to-text **generation**
· Improved performance over fully **supervised training** with higher ROUGE, BLEU, METEOR scores by ∼1%
· Deployed inference API using FastAPI and Docker for benchmark evaluation and reproducibility

Prompt-based Press Conference Video Editor (TwelveLabs Multimodal AI Hackathon)

· **Winners**: built natural language video editor using AWS S3, Transcribe, and Rekognition.
· Implemented speaker segmentation and prompt-based clip retrieval; achieved highest accuracy among 20 teams

Automated Low-Latency Trading System

· Parallelized trade orders for 30 NYSE stocks using **C++ PThreads** to reduce latency from 200 ms to 30 ms
· Increased profitability over 35 times via higher trade frequency and optimized order execution

Recreating Scotland Yard with Deep Q-Learning

· Trained DQN agents for Scotland Yard using **actor-critic algorithm** and Monte-Carlo Tree Search
· Improved agent win rate by over 40 points through adversarial training and environment simulation