Shrish Kumar Singhal

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Experience

Data Scientist June 2025 – Present
Boson Motors *San Jose, CA*

- Architected reinforcement learning framework using Soft Actor-Critic algorithm to optimize autonomous vehicle control across 10+ vehicle dynamics parameters, improving driving performance in offroad conditions by 25%
- Built real-time anomaly detection system processing 50K+ sensor readings per hour using LSTM autoencoders and statistical methods, predicting vehicle failures 2 weeks in advance and reducing unplanned maintenance by 34%
- Developed and deployed the full ML pipeline with automated retraining, keeping accuracy above 95% in production.

Quantitative Researcher Intern Feb 2025 – May 2025
Quant AI Research *New York, NY*

- Designed an LSTM-based pair trading strategy across NASDAQ, S&P 500, and Dow Jones index pairs using 10+ years of market data, generating 12% annual returns in backtesting
- Integrated macroeconomic indicators including 10-year Treasury rates using pandas, improving model performance by 15% during high-volatility periods

Student Researcher, Computer Vision Lab Aug 2021 – Sept 2023
Indian Institute of Technology Guwahati *Guwahati, India*

- Engineered attention-based deep learning model achieving 90% accuracy in lymph node detection from medical images, improving diagnostic efficiency for oncology department by 30%
- Implemented CT bone tissue segmentation using region-growing algorithms, achieving 93% Dice similarity coefficient

Education

New York University, Tandon School of Engineering Sept 2023 – Jan 2025
Master of Science in Computer Science *New York, NY*

Indian Institute of Technology (IIT) Guwahati July 2019 – May 2023
Bachelor of Technology in Electronics & Communication, Minor in Computer Science *Guwahati, India*

Technical Skills

Machine Learning: Reinforcement Learning (SAC, PPO, Q-Learning), Time-Series Forecasting (LSTM, Transformers, ARIMA), Anomaly Detection, Computer Vision, LLM Fine-Tuning, Generative AI

Languages & Frameworks: Python, SQL, R, C++, PyTorch, TensorFlow, Keras, scikit-learn, NumPy, pandas

Tools & Platforms: Spark, Polars, Docker, Git, Jupyter, AWS, VectorDB

Projects

LLM Fine-Tuning for Mathematical Reasoning – Achieved 82.5% accuracy on math reasoning tasks by fine-tuning Llama3-8B with LoRA & 4-bit quantization

Stable Diffusion XL Personalization – Fine-tuned SDXL with DreamBooth for personalized image generation using 5 user images and a prompt, reducing memory usage 30% on consumer GPUs

IceCube Neutrino Analysis – Processed 100GB of neutrino data using Spark/Polars, improving event prediction accuracy by 30% with CNNs

Achievements

Top 10 Finalist – National Aadhaar Hackathon 2021 (2,700+ teams) for identity verification application

Top 0.1% – Joint Entrance Examination 2019 (Ranked 1,395 among 1.5M+ candidates)

KVPY Fellowship 2018 – Top 0.5% of 50,000+ candidates, national science scholarship