Varun Deliwala

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EDUCATION

New York University, Courant Institute of Mathematical Sciences *August '23 - May '25*
Master of Science in Computer Science, GPA: 3.88/4.00
Ahmedabad University *August '19 - May '23*
Bachelor of Technology in Computer Science and Engineering, GPA: 3.48/4.00

WORK EXPERIENCE

Fouhey AI Lab @ NYU **New York, NY, USA**
Research Intern (Ongoing) *May '24 - October '24*

- Enhanced scalability and performance of spatio-temporal forecasting models by implementing efficient training and deployment techniques, supporting scalable AI infrastructure.
- Developed and integrated complex forecasting models with custom data pipelines, improving model inference accuracy, speed, and observability to ensure reliable, high-performance AI solutions.
- Conducted in-depth model evaluations and created custom validation frameworks, contributing to effective model governance and real-time deployment.

Tusker AI **Ahmedabad, India**
Machine Learning Intern *December '22 - May '23*

- Achieved 98.4% accuracy in automatic number plate recognition using YOLOv8 through extensive training, optimizing the algorithm for a custom dataset, and conducting thorough testing and error analysis.
- Developed a robust Optical Character Recognition (OCR) system with a 96.8% accuracy rate, utilizing Convolutional Recurrent Neural Networks (CRNNs) to improve text recognition.
- Improved model inference times by 25% on both CPU and GPU, leveraging hardware optimization techniques critical to large-scale AI system performance and cost-efficiency.
- Automated dataset annotation, reducing manual effort by 40% and streamlining video data preprocessing.

SilverTouch Technologies Ltd. **Ahmedabad, India**
Machine Learning Intern *May '22 - July '22*

- Refined time series forecasting models by implementing a hybrid ARIMA approach with optimized hyperparameters, resulting in a 20% increase in forecast accuracy for financial data.
- Boosted predictive accuracy by 15% through data quality improvements and advanced feature engineering.
- Reduced forecast error by 25% through the application of advanced statistical methods such as rolling window statistics and Fourier transformations, allowing better handling of seasonal trends and noisy data.

INDEPENDENT PROJECTS

Marketing Campaign Reviewing using Multiple AI Agent Crews [Github]

- Built an AI platform for real-time, demographic-specific campaign feedback using Cerebras for scalable, high-performance inference.
- Leveraged LLMs to configure diverse AI agent profiles, providing nuanced feedback on campaign effectiveness across demographics and enhancing insights for targeted marketing strategies.

Super Image Resolution using General Adversarial Networks(GANs) [Github]

- Accomplished high-resolution image estimates from low-resolution counterparts with a PSNR of 42 implementing super-resolution GANs (SRGANs) on the MNIST dataset, obtaining minimal color-shift and high-resolution results.

SKILLS

Computer Vision | Artificial Intelligence | Scalable Systems | AWS | SKlearn | Cuda | TensorFlow | PyTorch | Keras | C | C++ | Tableau | SQL | Git | Docker | Spring Boot | Java | Flask |