Nihaar Shah

U.S. permanent resident

nihaarshah@gmail.com : 8015487434
https://nihaarshah.github.io

Education

Columbia University, MS in Computer science (Advanced Machine Learning) ('19- Dec '20)

- Algorithms, Probabilistic Programming, Causal Inference, Unsupervised learning, ML theory, Natural Language Processing, Cloud computing, Database Systems (GPA: 3.78/4.00)
- **Research:** Reinforcement learning, Computational Neuroscience

Oxford University (UK), Master of Information Engineering ('17- '18)

- Specialized in Computer-Vision, Robotics, Machine Learning. GPA equivalent: 3.7/4.0

Oxford University (UK), Bachelor of Engineering ('14-'17)

- Broad-based syllabus ranging across Software, Electronics, Signals, Control, Mechanics, Fluids etc.

Proficient: Python (Keras, Pytorch, Pyro), MATLAB, SQL, AWS (serverless microservices) **Basic:** C++, C

Research and Work Experience

GE Global Research Centre (Niskayuna): Machine Learning Research Intern (June '20 – Aug '20)
Research in applying novel GANs for anomaly detection in tabular Gas Turbines sensor data. Paper in progress. Learned about various GE research areas and businesses from senior technical members.

Major League Baseball Advanced Media: Computer Vision Engineer (Nov '18 – Sep'19)
3D Visual geometry and Deep Learning to enhance the Statcast system.
- Player tracking and OCR, Camera calibration, Instance segmentation, Triangulation from multiple cameras, Skeletal pose estimation

Oxford Robotics Institute: Software Engineer intern (Summer '16)

- Built & owned part of a large codebase in C++ for a 2D laser of a self-driving car; used Eigen, Boost

Projects

Link to some of the completed project reports below: **https://tinyurl.com/nihaar-ai-projects**

'Deep Reinforcement learning using disagreement based intrinsic reward for robotics'

'Hierarchical decoding of multivariate neural time series using multi-headed convolutions and LSTMs'

'Bayesian estimation of bike sharing demand using Probabilistic programming in Pyro'

'Anomaly detection in tabular datasets using Variational Autoencoders, and Normalizing Flows'

'Deep learning on FMCW radar images using LiDar generated labels for autonomous vehicles'

'Calibrating a camera for 3D Computer Vision'

Cloud based Beer Catalog with User registration, Comments and API Gateway using AWS ECS & EC2

"Saving Oneself" - Saving the human brain connectome using machine learning

- Designed data & algorithms pipeline for processing images at immense scale