VINEET GARG

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401 Anderson St Apt 3M, College Station TX-77840

EDUCATION

Texas A&M University, College Station, TX *Aug'17 – May'19*

Master of Science in Electrical Engineering, GPA – 4.0/4.0

Courses – Machine Learning, Deep Learning, Reinforcement Learning, Probabilistic Graphical Models, Software Engineering

Indian Institute of Technology (IIT) Kanpur, India *Jul'11 – Jun'15*

B.Tech in Electrical Engineering, GPA – 7.9/10

Courses – Digital Signal Processing, Image Processing, Speech Signal Processing, Convex Optimization

PROFESSIONAL EXPERIENCE

Apple Inc

Software Engineering Trainee *May'18 –Aug'18*

- Researched and implemented machine learning models for KPI Alert correlation, root cause analysis and anomaly detection for site reliability and production engineering applications
- Developed a deep learning architecture for clustering millions of KPIs and Alerts reducing the inference time 10 folds
- Reduced the training time and data redundancy in alert prediction from LSTM by up to 20 times
- Contributed to the development of an interactive platform to train and deploy machine learning models

Systemantics India

Project Engineer *Jun'15 – Jun'17*

- Coordinated with mechanical and software teams to develop India's first commercial 6-axis industrial robot
- Contributed to the embedded software development for distributed robot architecture, motion control and planning
- Designed and experimented control system models for vibration free motion of 6-axis robot at speeds as high as 20 rpm

SKILLS

Programming Languages: C, C++, Python (scikit-learn, NumPy, pandas, TensorFlow, Keras, PyTorch), Spark

Machine Learning: Time Series, Hypothesis Testing, Classification and Regression, Deep Learning

PROJECTS

Deep Learning: Object Tracking and Semantic Segmentation in videos *Aug'18 – Mar'19*

- Designed deep learning algorithms for instance and semantic segmentation in computer vision applications
- Combined motion vector and region based Convolutional nets to achieve real-time object tracking in videos leading to reduction in inference time by up to 40%

Reinforcement Learning: Meta Adversarial RL *Sept'18 – Dec'18*

- Designed robust reinforcement learning algorithms for agents by training adversaries using meta learning

Probabilistic Graphical Models: Topic Modelling in Text Data *Mar'17 –Apr'17*

- Performed knowledge discovery and sentiment analysis in large text datasets using generative algorithms such as Latent Dirichlet Allocation and Hierarchical LDA

Machine Learning: Fraud Detection in Online Bidding *Oct'17 – Dec'17*

- Modelled human and bot behavioral traits during e-commerce online bidding by using feature weighing techniques
- Separated fraud and legitimate users with ROC score of 0.92 by using random forest and AdaBoost classifiers

Probabilistic Graphical Models: Variational Inference in Neural Networks *Oct'17 – Dec'17*

- Explored Bayesian paradigm in deep autoencoders and recurrent neural networks using probabilistic graphical models

Speech Signal Processing: Non-Concurrent multiple speaker tracking *Feb'15 - Apr'15*

- Demonstrated tracking of non-concurrent speakers in a reverberant environment using EKF and Particle Filter

HONORS

- Received graduate research scholarship from Electrical Engineering department at Texas A&M University
- Recipient of Boeing-IIT Kanpur Scholarship, 2013-14 for undergraduate research in autonomous robotics