VINEET VINAYAK PASUPULETY

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY, ATLANTA
MS, Computational Science & Engineering, College of Computing | Expected Dec 2018
Specialization: Computer Vision, Deep Learning, Natural Language Processing

NATIONAL INSTITUTE OF TECHNOLOGY, TRICHY
B.Tech, Electronics & Communication Engineering | May 2017 | CGPA: 8.9/10.0

EXPERIENCE

COLLEGE OF COMPUTING | Graduate Researcher, Data Analytics & Simulation Lab
August 2017 – Present | Guide: Dr. Hongyuan Zha | Atlanta, USA
- Working on Spatio-Temporal Multi-Step Reasoning in videos through Dynamic Knowledge Graphs and Visual Question Answering

ADOBE | Research Intern, Big Data Experience Labs
May 2017 – August 2017 | Guide: Dr. Niyati Chhaya | Bangalore, India
- Designed deep models to capture complex edits Photoshopped onto natural images
- Performed Dependency Parsing/Vector Space Analysis/Topic Modelling to map Photoshop tool-effect-region tuples into meaningful tutorial steps for novices
- Developed with TensorFlow/NLTK/OpenCV and D3 for plugin
- Awarded the **"Most Creative Research Project"** for 2017 amongst 23 teams

COMPSIG | Researcher, Pattern Recognition & Computational Intelligence Labs, NITT
Jan 2017 – May 2017 | Guide: Dr. E.S. Gopi | Trichy, India
- Developed sentiment mining algorithms to rate online-retailed product reviews on basis of polarity and subjectivity – objectivity; compared with Ground Truth ratings
- Performed concise and cache oblivious visualization of classified reviews
- Developed with Numpy/Matplotlib/NLTK/Django and D3

JET AIRWAYS | Software Intern, Supply Chain
Nov 2016 – Jan 2017 | Guide: Mr. Ishan Dhar | Mumbai, India
- Performing Data Mining/Predictive Analytics for MRO activities; Lead a team of 10 Planners
- Reconfigured automated inventory management modules for Boeing 737 fleet

TLI – AP | AI Research Intern, NUS Business School
Jan 2016 – July 2016 | Guide: Dr. Mark Goh | Kent Ridge, Singapore
- Ideated air freight route games to model multiagent strategy equilibrium
- Designed System Dynamic simulations to mine financial strategies for alliance stability
- Developed with Mathematica, AnyLogic; Published 2 international conference papers
- Only Indian undergraduate to be awarded IRI Fellowship 2016

CiSTUP | Research Intern, Indian Institute of Science
September 2015 – February 2016 | Dr. Ashish Verma | Bangalore, India
- Solved computational social choice problems to develop optimal strategies for airlines to compete against high speed rail services in developing economies.
- Simulated optimal quantities and frequencies over travel times, willingness-to-pay, passenger types etc. to mine demand insights. Paper under review in Transportation Research: Part B

SKILLS

- **Programming/Scripting Languages:** (Proficient) C++, Python, MATLAB, SQLite; (Familiar) Java, NodeJS, Mathematica, R, GAMS, LaTex, Android Eclipse
- **Frameworks/Libraries:** (Proficient) Keras, TensorFlow, NLTK, OpenCV, Scikit-Learn, Numpy, D3, TextBlob; (Familiar) Hadoop, Pig, Hive, Spark, Azure, Django, Git, Gephi

PROJECTS

- **Image Denoising Game Design and Algorithms**   November 2016
  Designed game theoretic heuristic for finding optimal quality neighbours to improve denoised pixel estimates and reduce intensity correlation; Optimal tradeoff in metrics

- **Stock Market Stability Analytics**   October 2016
  Used Pandas/NumPy to scrap stocks of Fortune 500 companies; Measured stability indices from capital returns since IPO & stock market sentiment from Tweetchup.com

- **ANNs & Nature Based Optimizations for Microwave Filter Design**   March 2016
  Designed optimal Microwave filters, using Artificial Neural Networks & Nature Based Optimizations like PSO/ACO/SNO etc. with varying specifications.

- **Estimation-based AWGN Filtering for corrupted Digital files**   September 2015
  Used Bayes-Minimax Detection to estimate thresholds for high order Weiner Filters

- **Revenue management system with dynamic pricing**   May 2015
  Learnt demand using dynamic programming, Kalman Filters for oligopoly markets

- **Adaptive Trajectory Optimization for Journey Restricted UAVs**   June 2015
  Designed UAV guidance laws in windy conditions using Monte Carlo Simulations; performed dynamic optimization of design matrices for efficient tracking

- **Chess/Battleship/Searchable Calendar**   September 2013
  Used Reinforcement Learning to develop intelligent applications in C++ with 72% strategy prediction accuracy for machine operations**.** Appointed as TA for CS101 practicals**.**

PUBLICATIONS

- [Upcoming] Pasupulety, VV et al. (2017), Deep CNNs for automatic make-up detection in digitally edited images

- Pasupulety, VV; Goh, M, Air Freight Hub Competition with Airport Demand Enhancing Services, ISL 2016, Taiwan. **Nominated for Best Paper** (**8.8/10**). Journal paper under review at IJLM

- Pasupulety, VV; Goh, M, The Value Alliance: Is It Worth It?, ICAED 2016, Thailand

AWARDS

- **Ventura 16** (International Business Plan Fest): Ideated an internet startup to connect waste & recycling firms. Guided by mentors from Chennai Angels & GreenBuild Products. Awarded **Best Student Idea** by VCs from Sequoia Capital, Helion Partners and Matrix Partners out of 368 entries over 3 rounds.

- **Pragyan16** (NITT International Techno-Management Fest): Finalist for developing a custom E-Signature site in Laravel PHP/MySQL for secure, efficient and timely document attestation.

POSITIONS OF RESPONSIBILITY

- **Internship Representative** (ECE 2013-17), interface between company HR & students

- **Member, DataByte,** NITT Data Science Society, guiding 30 juniors in data science by handling company sponsored projects

- **Member, PROBE 2016 Content Team**, NITT ECE All-India Symposium, which had a footfall of 1200 participants

- **Treasurer, DHRUVA** Science of Living Club; Organized philosophy and personality development guest lectures & camps (2014-17) for 180 colleges from all over India at 7 different cities.