

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 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 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 [TRB](#)

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, TextBlob; (Familiar) Hadoop, Pig, Hive, Spark, Azure, D3, 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 Tweekup.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. 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)**. Under review [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 E-Signature site in Laravel PHP/MySQL for secure efficient 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.