Rohan Chandra   Email : **rohan@cs.umd.edu**

ACADEMIC DETAILS

Program	University	GPA(Last Two Years)	Class High
M.S. in CS, 2018	University of Maryland, College Park	3.783	-
B.Tech in ECE, 2016	Delhi Technological University, India	80.00	84.00

Undergraduate Thesis: A Novel Architecture For A Band-Stop Notch Filter. **Paper**

RELEVANT CLASSES

PhD level	Text(coverage)	Masters level
Optimization	*Boyd/Research Papers*	Linear Algebra
Machine Learning	*UML, FML, Murphy*	Prob. and Stats
Computer Vision	*Research Papers*	Statistics I
Spectral Methods and Reinforcement Learning	*Research Papers*	

NON-CONVEX OPTIMIZATION & MACHINE LEARNING

- **Phase Retrieval:** Created PhasePack, a library for various classical and contemporary phase retrieval algorithms. PhasePack's purpose is to create a common interface for a wide range of phase retrieval schemes, and to provide a common test bed using both syntheitc and empirical imaging datasets.

- **Low Rank Matrix Estimation:** As part of my M.S. thesis, currently working on solving the low rank matrix estimation problem without lifting to higher dimension.

- **Texture Synthesis using Stacked VAE's:** Based on the success of DRAW - a generative model to create images, I am extending the concept to create textures.

COMPUTER VISION

- **Autonomous Vehicles:** Implemented the lane detection module and helped engineer a joystick enabled 3-wheeler. Also worked in navigation and localisation.

- **Structure from Motion:** Wrote code from scratch and successfully reconstructed a 3-D scene from multiple images using non-linear optimization of feature point triangulation, PnP, and finally bundle adjustment. Received highest points for this project.

TEACHING ASSISTANT

- Discrete Mathematics (Fall 2017)

- Intro to Object Oriented Programming (Spring 2017)

- Computer Networks (Fall 2016)

DEPARTMENTAL SERVICE

- Part of the fall 2017 **review committee** at UMD that screens applications for the Masters in CS program.

STRENGTHS

- **Mental Math, Speed Math**
  Techniques I developed, and are recognized:

  - Faster method to mentally multiply numbers by 9, 99, 999... and so on (method co-authored with **Dr. Arthur Benjamin**
  - Alternate method to square two digit numbers.
  - Generalizing the "Find The Missing Digit Trick!"

- **Chess**: State Level Champion