Prateek Malhotra

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San Jose, CA

Education

- **University of California, Los Angeles** — Los Angeles, CA
  Master of Science in Computer Science; GPA: 4.0/4.0 — *Sept. 2018 – Mar. 2020*
- **Pune Institute of Compute Technology** — Pune, India
  Bachelor of Engineering in Information Technology; GPA: 3.76/4.0 — *July 2014 – July 2018*

Programming skills

- **Languages**: Python, C, C++, MATLAB, Julia, Unix Shell, CUDA programming
- **Frameworks**: PyTorch, Tensorflow, OpenCV, Flask, Scikit-Learn, Selenium
- **Tools**: AWS, Git, Tableau, GCP, Docker, Airflow, Kubernetes, AWS Lambda, Boto3

Experience

- **Alectio, Inc.** — Santa Clara, CA
  Machine Learning Scientist — *Apr. 2020 - Present*
  - **Automated Data Labeling**: Identification of noisy and redundant data points, unsupervised clustering, and pseudo-labeling to reduce the costs associated with the process of data collection and its subsequent labeling.
  - **Active Learning**: Design and development of an AL framework supporting a variety of SOTA query strategies.
- **HOVER, Inc.** — San Francisco, CA
  Computer Vision Engineer Intern — *June 2019 - Sept. 2019*
  - **Scene understanding**: Plane R-CNN based deep learning models for surface normal estimation and plane detection. Occlusion detection for complex residential structures using a student-teacher based network.

Teaching

- **Teaching Assistant, UCLA, Spring 2019**: SOC 111 - Social Networks. Topics: Information dissemination, evolution of social structures, large-scale graph analysis.
- **Teaching Assistant, UCLA, Fall 2020**: CS 130 - Software Engineering. Topics: UML, Design principles, Software testing, Hoare Logic.

Projects

- **DeepWatch: White-Box Watchpoint for Deep Neural Networks**:
  Guided by Prof. Miryung Kim (UCLA CS dept) on neuron-coverage based regularization and analysis for detecting adversarial examples in a set of realistic images.
- **Congested Scene Analysis using Dilated Convolutional GANs**:
  Crowd density and count estimation of a crowded scene by using GANs with dilated convolution kernels. Undergraduate thesis project performed under the guidance of Prof. J.B Jagdale.
- **Redistricting using Active Contours**:
  A new computational redistricting method that uses Chan-Vese active contours and K-Means clustering for drawing district boundaries to prevent gerrymandering.
- **Multi-grid Generative Convolutional Neural Networks**:
  Implemented multiple, correlated deep energy based networks trained on the Celeb-A dataset to generate new photo-realistic images. Performed in the VCLA lab (headed by Prof. Song-Chun Zhu in the CS dept) under the guidance of a PhD student Ruiqi Gao.

Achievements

- **Hack2innovate, Mumbai Edition**: Won multiple challenges at an Artificial Intelligence hackathon organised by Samsung, NVIDIA, and the Government of India (NITI Ayog).
- **NTT DATA Internship, Tokyo**: Selected for a six week IT Management internship from a pool of more than 800 applicants.