## Prateek Malhotra

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### **EDUCATION**

# • University of California, Los Angeles

Master of Science in Computer Science; GPA: 4.0/4.0

Los Angeles, CA Sept. 2018 – Mar. 2020

# • Pune Institute of Compute Technology

Bachelor of Engineering in Information Technology; GPA: 3.76/4.0

Pune, India July 2014 – July 2018

## SKILLS

• Languages: Python, C, C++, MATLAB, Julia, Unix Shell, CUDA programming

• Frameworks: PyTorch, Tensorflow, OpenCV, Flask, Scikit-Learn, Selenium, Cython

• Tools: AWS, Git, Tableau, GCP, Docker, Airflow, Kubernetes, Kubeflow, AWS Lambda, Boto3, Gitlab CI

## WORK EXPERIENCE

• Syntiant Corp.

Irvine, CA

Member of Technical Staff - Machine Learning Research Engineer

Aug. 2021 - Present

- **Text to Speech**: Building and maintaining a state of the art voice synthesizer with over 3000 voices covering a variety of accents, reducing data collection costs by more than 50% for demo models.
- **Keyword Spotting**: Building compact, production-ready Keyword Spotting models that are deployed on Syntiant's patented edge devices and are used by over 10 million customers.

• Alectio, Inc. Santa Clara, CA

Machine Learning Scientist

Apr. 2020 - Aug. 2021

- Automated Data Labeling: Identification of noisy and redundant data points, pseudo-labeling, and unsupervised clustering. On average, the platform saved clients' data collection costs by over 40%.
- Active Learning: Design and development of an AL framework supporting a variety of SOTA query strategies which was part of the core product actively used by multiple enterprises.

• 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 which reduced false positives by over 80% in downstream tasks.

#### 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.