

Pradeep Singh

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EDUCATION

SAN DIEGO STATE UNIVERSITY

MS IN COMPUTATIONAL SCIENCE

Expected May 2019 | San Diego, CA

GPA: 3.6/ 4.0

UNIVERSITY OF MUMBAI

B. ENGG. IN ELECTRONICS

Aug 2011 - June 2015 | Mumbai, India

LINKS

Github:// [pradeepsinngh](#)

Webpage:// [pradeepsingh.xyz](#)

LinkedIn:// [pradeepsinngh](#)

Twitter:// [@pradeep_sinngh](#)

COURSEWORK

MACHINE LEARNING

Speech Processing (Deep Learning)

Natural Language Processing

Machine Learning

Numerical Optimization

Parallel Computing

Computer Vision

DATA SCIENCE

Statistical Inference

Data Science & R Programming

Bayesian Statistics

Principles & Techniques of Data Science

The Foundations of Data Science

SKILLS

PROGRAMMING

Python • C • C++ • Matlab • R

DATA & VISUALIZATION

SQL • Tableau • Shiny • Matplotlib

D3.js • Seaborn

MACHINE LEARNING

TensorFlow • Keras • Numpy

Pandas • Scipy • SKLearn

PLATFORMS

Google Cloud • macOS • Linux

Windows

RESEARCH

COMPUTATIONAL RESEARCH CENTER | RESEARCH ASSISTANT

Aug 2017 – Till date | San Diego, CA

- Neural Computation and Mechanism for visual processing in the brain.

RAMAN RESEARCH INSTITUTE | RESEARCH INTERN

Dec 2014 – Jan 2016 | Bangalore, India

- Parallelizing FFT/DFT on FPGA (Virtex 7) using OpenCL. A speed up of 70% in performance and a decrease of 30% in resource utilization was achieved.

PROJECTS

AUTOMATIC SPEECH RECOGNITION | SPEECH PROCESSING [CODE]

- Built a end-to-end automatic speech recognition (ASR) pipeline using recurrent neural networks which accepts raw audio files as input & return a predicted transcription of the spoken language.

MACHINE TRANSLATION | NLP/ DEEP LEARNING [CODE]

- Built a end-to-end machine translation pipeline using recurrent neural network which takes English text & return it's French translation.
- Experimented with various models: simple RNN, RNN with Embedding, Bidirectional RNN, Encoder-Decoder RNN & achieved accuracy of 98%.

IMAGE RECOGNITION USING CNN | COMPUTER VISION [CODE]

- Built and trained 5 different Convolutional Neural Networks using Keras and TensorFlow to classify 70,000 fashion images into 10 labels.
- Achieved accuracy of 95% with VGG model + batch normalization.

PARALLELIZING DEEP LEARNING | PARALLEL PROGRAMMING [CODE]

- Implemented a sequential and parallel neural network model using data based parallelism in Python using MPI and GPU computing. Measured the improvement in performance and speed up in training time.

SENTIMENT ANALYSIS | NLP/ DEEP LEARNING [CODE]

- Built an end-to-end sentiment classification system using Recurrent neural network and Naive Bayes classifier to classify the sentiment of 50,000 movie reviews in IMDb dataset.

TOPIC MODELING | NLP [CODE]

- Built a generative statistical model - Latent Dirichlet allocation using Bag of Words and TF-IDF to classify one million news headlines to a particular topic.

AWARDS/ ACHIEVEMENTS

2017	University	Full Tuition Waiver + Stipend
2015	National	Research Fellowship at Raman Research Institute
2014	Undergraduate	Vice-chairperson at IEEE Student Branch
2014	Undergraduate	Founder and Editor-in-chief at KC Xplore (newspaper)
2013	Undergraduate	Undergraduate Research Fellowship