

## EDUCATION

### SAN DIEGO STATE UNIVERSITY M.S. IN COMPUTATIONAL DATA SCIENCE

May 2020 | San Diego, CA  
GPA: 3.7/ 4.0

### UNIVERSITY OF MUMBAI B.S. IN ELECTRICAL ENGG. Aug 2011 - June 2015 | India

## COURSEWORK

### MACHINE LEARNING

Deep Learning  
Machine Learning  
Numerical Optimization  
Parallel Computing

### DATA SCIENCE

Statistical Inference  
Big Data: Tools and Methods  
Techniques of Data Science  
Foundations of Data Science

## SKILLS

### PROGRAMMING

Python • Matlab • C/C++

### MACHINE LEARNING

TensorFlow • Keras • Scikit-learn  
PySpark

### DATA & VISUALIZATION

SQL • Pandas • Matplotlib  
Numpy • Seaborn • Scipy

### PLATFORMS

macOS • Linux • Git • Docker

## GITHUB PROJECTS

**Deep Clean** : Python package to clean image and text data.

**Quick ML** : Read ML notes on the fly.

**Data Science 101** : How-to-Guide.

## ACHIEVEMENTS

2018 Tuition Scholarship  
2017 Tuition Scholarship  
2016 Founder @ **ResearchX**  
2013 Editor at KC-Xplore  
2013 Vice-chairperson - IEEE Branch

## EXPERIENCE

### DASSAULT SYSTÈMES | DEEP LEARNING RESEARCH INTERN | (PAPER | POSTER)

June - Dec 2019 | Boston, MA

- Research focused on Deep Learning for CFD Simulations.
- Researched and proposed novel deep learning solutions for accelerating CFD simulations using neural networks.
- Developed SRCFD, a generalized and platform agnostic framework, that can super resolve coarse-to-fine CFD simulations.
- Developed Python package to extract, process and convert mesh data to graph data.
- Built in-house data set for Dassault Systèmes.
- Built docker images and containers to containerize ML models.

## RESEARCH

### SAN DIEGO STATE UNIVERSITY | RESEARCH ASSISTANT | (THESIS)

Aug 2017 - May 2019 | San Diego, CA

- Research on Neural mechanisms for target (object) tracking in visual system.
- Built computational models of networks neurons and astrocyte in Matlab.
- Simulated computational models of facilitation mechanism, calcium dynamics in biological cells and analyzed gigabytes of data in Matlab.
- Carried out comprehensive parametric study of our models and thus characterizing facilitation in visual system.
- Presented Poster at ICIV 2019 and one journal paper (in-progress).

## PROJECTS

### NEURAL MACHINE TRANSLATION | NLP/ DEEP LEARNING (CODE | REPORT)

- Developed an Machine translation pipeline using recurrent neural networks: simple RNN, RNN with Embedding, Bidirectional RNN, Encoder-Decoder RNN.

### IMAGE RECOGNITION USING CNN | COMPUTER VISION (CODE | REPORT)

- Built 5 different Convolutional Neural Networks using Keras and TensorFlow to classify 70,000 fashion images into 10 labels.

### AUTOENCODERS | COMPUTER VISION (CODE | REPORT)

- A survey project on family of Autoencoders. Implemented different forms of autoencoders: sparse, denoise, contractive, variational autoencoder in tensorflow.

### BAYESIAN OPTIMIZATION | NUMERICAL OPTIMIZATION (CODE | REPORT)

- Built an hyperparameter optimization algorithm that finds better hyperparameters for machine learning models in smaller number of steps than random or grid search.

### PARALLELIZED DEEP LEARNING | PARALLEL COMPUTING (CODE | REPORT)

- Accelerated neural network model training time by implementing data based parallelism using MPI.

### CHURN PREDICTION | DATA SCIENCE (CODE)

- Built different ML models: SVM, Tree based models, logistic regression for predicting customer churn rate using PySpark and Scikit-learn.

### SENTIMENT ANALYSIS | NLP/ DEEP LEARNING (CODE)

- Built an sentiment classification system using: Recurrent neural network, Naive bayes and Gradient boosting.