

# PURVAK LAPSIYA

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## EDUCATION

### University of Southern California

Master of Science in Computer Science

Coursework – Machine learning, Deep Learning and Applications.

Los Angeles, CA

August 2018 – May 2020

### University of Mumbai

Bachelor of Technology in Computer Engineering; GPA: 3.95/4 (University Rank: 2)

Mumbai, India

August 2014 – May 2018

## SKILLS

**Programming:** Python 2.x, Python 3.x (preferred), Java 8, and C.

**Machine Learning** – Tensorflow, PyTorch, Keras, Scikit-learn.

**Analytics** – Python, R, Excel, Tableau, RapidMiner, Firebase, Google Analytics, numpy, pandas, seaborn, matplotlib, plotly.

**Web:** HTML, CSS, JavaScript, D3.js, Chart.js.

**Databases:** Oracle SQL 11g, SQLite, MySQL 5.7, MongoDB.

**Tool:** AWS (EC2, RDS, S3), GCP (Compute Engine, Analytics), SAP Cloud Platform, Git, Matlab, Microsoft Office.

## WORK EXPERIENCE

### Frenzy.ai

Software Engineer Co-op

Los Angeles, CA

January 2020– Present

- Building backend infrastructure for machine learning and migrating services for an early-stage start-up in interdisciplinary of Computer Vision, Artificial Intelligence and Fashion on GCP and Azure.

### SAP

Data Scientist Intern

Palo Alto, CA

June 2019 – August 2019

- Designed an intelligent service for SAP Client to detect custom tables in PDF documents and extract header fields, line items and integrated it with SAP Cloud Platform.
- Researched and implemented a deep learning based solution for SAP SuccessFactors, which detects hidden biased words in the job description with 93.5% accuracy.
- Developed micro-services of skew detection-correction of documents with RMSE error of 1.7% and incorporated into a preprocessing pipeline.

### Institute of Creative Technologies, USC

Graduate Research Assistant, PI | Dr. Andrew (Wei-Wen) Feng

Los Angeles, CA

January 2019 – May 2019

- Worked on building 3D U-Net using TensorFlow for learning dense volumetric segmentation from sparsely annotated point clouds in a semi-supervised manner for better simulation and modeling of 3D terrain.
- Improved dice coefficient of segmentation by 6% to 92.44%, by integrating Conditional Random Fields as RNN for spatial smoothing during neural network training & Dense CRF for post-processing.
- Implemented distributed training and re-training procedures for neural network to handle 18 million data points per point cloud.

### Indian Space Research Organization

Software Engineering Intern

Mumbai, India

March 2018 – July 2018

- Facilitated interactive visualizations on node.js dashboard for Application Scientist to monitor drone status and node heartbeats.
- Built object detection modules using Tensorflow for Garbage and Road detection with an IOU of 92% and 81% respectively.

## PROJECTS

- **Autonomous Swarm drones, Final Year Thesis** – Creating a coordinated swarm building a de-centralized approach (based on idea of Artificial Potential Fields Simulation). The project was funded by RiiDL, an Indian incubator.
- **Brain Informatics** – Developed a tool to analyze and visualize workload, on soldiers' brains through 14, 64, 256 channel EEG data by various non-linear classifiers and predictive models.
- **Learning Multi-objective games using Inverse Reinforcement Learning** – Developed a Novel Approach to extract and combine rewards of games to speed up training process.

## ACHIEVEMENTS / EXTRA-CURRICULAR ACTIVITIES

- Runners up, Smart India Hackathon'18, under ISRO with 100,000+ participants across 27 departments.
- PyTorch Scholarship, Facebook.
- Directed Research, Information Retrieval and Data Science group.
- Teaching Assistant, AI winter program 2018.