Jinesh Mehta

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Projects & Publications

(HCA-DBSCAN) HyperCube based Accelerated Density Based Spatial Clustering for Applications with Noise | *NeurIPS Workshop 2019*

- Innovated a novel grid-based clustering algorithm which reduces the number of comparison for forming cluster exponentially resulting in an overall time complexity of $n^{3/2}$ better than n^2 complexity of traditional DBSCAN algorithm.
- Acquired a significant computational speed up-to 58% over other improvements of DBSCAN algorithm while maintaining 100% accuracy.

Face Detection and Tagging Using Deep Learning | *International Conference on Computer, Communication and Signal Processing (ICCCSP) 2018*

- Engineered the concept of Multi-view Face Detection and Tagging using Convolutional Neural Networks (CNN) - identify faces from a image and provide labels to the detected faces using Tensor-flow framework and Caffe library.
- Acquired an overall accuracy of 85% for facial recognition.

Pothole Detection and Analysis System (PoDAS) for Real Time Data Using Sensor Networks | *Journal of Engineering and Applied Sciences 2017*

- Constructed a low-cost wireless sensor based end-to-end system using Ultrasonic sensors, Arduino Uno R3, GPS module, Gyroscope and Accelerometer. Using this system, location of detected potholes was notified to the appropriate government bodies.

Skills

- **Languages**
  Python • C++ • C • Java • MySQL
- **Frameworks & Platforms**
  Tensorflow • PyTorch • Laravel • AWS SageMaker • Qt

Experience

Software Engineer - Honeywell Technology Solutions Lab Pvt. Ltd *July 2017 - Present*

- Designed simulation and analytical tools used in engineering aircraft engines focused on turbines, compressors and fans.
- **Key achievements** :
  - Remodeled four aerospace analytical tools to optimize and remove ambiguity, resulting an additional annual productivity savings of **$1,000,000** for Honeywell Aerospace.
  - Replaced existing deployment framework with Wix (Open Source framework) for aerospace tools, reducing enterprise software license costs of **$500,000**.

Scientific Staff - Center for Artificial and Machine Intelligence (CAMI) *Oct 2015 – June 2017*

- Engineered deep learning algorithms used for recognizing fraud detection and clustering algorithms for weather predictions and earthquake study.
- **Key achievements** :
  - Collaborated with three research scholars to produce two research papers namely : **'Face Detection and Tagging Using Deep Learning '** & **'HyperCube based Accelerated Density Based Spatial Clustering for Applications with Noise '**.

Software Intern - Fracktal Works Pvt. Ltd *June 2016 – July 2016*

- Developed desktop applications as the part of the software team.
- **Key achievements** :
  - Designed a desktop-based application, **'Fracktory 2.0 '**, using wxPython framework which allows clients to assign print jobs to 3D printers remotely and check printer status in real-time.

Education

Machine Learning Engineer Nanodegree - Udacity

- Grade: **Ongoing** • Year: **2019**

B.Tech. in Computer and Communication Engineering - Manipal Institute Of Technology

- Cumulative GPA : **8.37 / 10.0** • Year: **2013 - 2017**