Naveen Reddy Desanur

dnaveenr.github.io

Email : dnaveen356@gmail.com
Mobile : +91-8861631807

EDUCATION

- **PES University** — Bengaluru, India
  B.Tech in Computer Science and Engineering; CGPA: 9.35 / 10.0 — *Aug. 2014 – May. 2018*

- **Narayana PU College** — Bengaluru, India
  High School; 94.83% — *2012 – 2014*

INTERESTS AND WORKED ON

- **Interests**: Computer Vision, Deep Learning, Machine Learning.

- **Worked On**: Image Classification/Recognition, Object Detection/Recognition, Face Recognition, On-Device Machine Learning, Image Similarity, Image Quality Analysis.

EXPERIENCE

- **Sensara Technologies India** — Bengaluru, India
  Machine Learning Engineer — *Jan 2018 - Present*
  - **Smart TVs - Channel Logo Recognition**: Worked end-to-end on Channel Logo Recognition using Deep Learning which is part of over 100K+ Smart TVs. This work part of Smart TVs having Sensy Launcher such as Blaupankt, Hyundai, VG TVs.
  - **Audience Measurement Device - AI-powered Pass Through Box**: Worked on integration of Edge AI features such as Channel, Operator Recognition along with features such as Black Screen Detection, local Audio Content Recognition, HDMI State Detection, Landing Page Detection. Worked on ensuring lag-free experience for end-user along with these computations.
  - **Image Quality Analysis** : Worked on image quality analysis to rank and select best Show Banners, in-Scene, and apparel images. Images were analysed on a range of parameters such as Aesthetic quality, Blurness, Contrast, Interlacing.
  - **Improvement of Face Recognition** : Improved existing face recognition systems to current state-of-the-art face recognition models. This lead to 4x improvement in terms of precision and recall.
  - **AI-based Video Indexer** : Added AI capabilities to the Video Indexer which includes Brand Logo Detection, Object Detection, and Face Recognition for on-Demand videos. Worked on getting the best accuracy, recall with minimal compute and latency.
  - **Automated Tagging of Commercials, Promos played on TV** : Working on automatic matching of Commercials for Products and Programs(House Promos) using unsupervised approaches which includes clustering, distance-based matching.

- **Sensara Technologies India** — Bengaluru, India
  Machine Learning Intern — *May 2017 - July 2017*
  - **MetaData Classification of TV Advertisements using Deep Learning**: Worked on state-of-the-art object detection techniques using Convolutional Neural Networks and Image based Search Retrieval methods. Explored at how the recognition speed can be increased by using Locality Sensitive Hashing.

- **PES University** — Bengaluru, India
  Summer Research Associate — *May 2016 - July 2016*
  - **Pattern Recognition and Machine Intelligence Lab**: Implemented two Convolutional Neural Network Based Architectures for Face Recognition. The effect of using edge detection filters(Gabor, Frangi) in the pipeline of CNN was analysed. The models were tested on real world datasets and achieved an average accuracy of $95\% \pm 2\%$. It was found that the models reduced the training time significantly and increased the overall accuracy considerably.

SKILLS

- **Languages**: Python, Java, C, Javascript
- **Tools/Frameworks**: OpenCV, Tensorflow, Keras, PyTorch, scikit-learn, Docker.

Honors and Awards

- **Innovation Award - Smart India Hackathon 2017** organised by Government of India [News]
- **Among Top 10** in Microsoft Mobile Innovation Lab's Hackathon - 2016.
- **CNR Rao Merit Scholarship Award** for being in Top 20% of CS Dept- PESU - [2014-2018]

Publications

- G-CNN and F-CNN: Two CNN Based Architectures For Face Recognition at ICBDACI, 2017, India, Vinay A, **D.Naveen Reddy**, Abhishek Sharma [Paper]