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Education

- MS., Clemson University, Computer Engineering. 2018 - 2020
  Thesis - Segmentation and recognition of eating gestures from wrist motion using deep learning: Implemented a novel deep learning model for automatically detecting periods of activity from wrist-motion and classifying these into specific eating related gestures. The data was recorded using IMU sensors fitted inside a watch-like device.
- MSc., Delft University of Technology (TU Delft), Electrical Engineering. 2014 - 2017
  Thesis - Intensity normalization in brain MRI images using machine learning: Conducted research on synthetically generating consistent tissue contrast in multi-scanner MRI images of patients, for improving automatic diagnosis of patients that relocate after injuries.
- B.E., Maharashtra Institute of Technology - Pune, Electronics & Telecommunication Engineering. 2008 - 2012

Courses & Projects

- Clemson University, Graduate Student Summer Employee. May 2019 – Aug. 2019
  Conducted research on synthetically staining phase-contrast microscopy images using a new neural network known as cyclic conditional generative adversarial networks (CC-GAN). Our model achieved a mean similarity of 0.9 (Pearson correlation coefficient) with the test set images at small size (256 x 256) and 0.8 at full size (2048 x 2048).
- Clemson University, Deep Learning. Jan. 2019 - May 2019
  This course covered the latest research in neural networks such as CNN, LSTM and GAN. For our project, we implemented a residual neural network (ResNet) for classifying images as bullying or non-bullying based on the activity (verbal/physical) contained in them.
- Clemson University, Analysis of Tracking Systems. Aug. 2018 - Dec. 2018
  Studied and implemented models for predictive analysis on different data sets using techniques such as linear and non-linear regression. In addition, Kalman filter, extended Kalman filter and particle filter were applied for continuous sequential data, while discrete sequential data was analyzed using a hidden Markov model (HMM).
- TU Delft, Machine Learning & Kaggle competition 'Final Assignment-IN4320'. Mar. 2016 - Aug. 2016
  Studied different techniques related to classifier development such as loss regularization, boosting, stochastic gradient descent, semi-supervised learning, reinforcement learning and multiple instance learning. Implemented a classifier that predicted if a person would earn more than 40,000 Euros in a year based on census data containing mixed features and missing entries with 83.45% accuracy.
- TU Delft, Digital Speech & Audio Processing. May 2015 - Jul. 2015
  Studied different concepts such as the human hearing system, speech & audio coding and speech enhancement. Implemented a model for far-end noise reduction that produced clean and audible speech in digital hearing aids using a non-linear estimator for statistical properties of non-stationary noise sources and and frequency domain speech enhancement.

Experience

- Clemson University, Graduate Grading Assistant and Graduate Teaching Assistant. Aug. 2018 - May 2020
- Maharashtra Institute Of Technology, Co-Researcher. Feb. 2018 - Jul. 2018
- Climate Connect Pvt. Ltd., Data Scientist. Aug. 2017 - Jan. 2018
- Cognizant Technology Solutions Pvt. Ltd., Engineer Trainee. Dec. 2012 - Oct. 2013

Technical Skills

- **Programming:** C (intermediate), MATLAB and Python (proficient). **OS:** Linux and Windows.
- **Tools:** Cygwin, git, Keras, MSys2, numpy, OpenCV, pandas, PyTorch, scikit-learn, TensorFlow, vim.
- **Volunteer Work:** Clemson University, Reviewer for:
  - IEEE - EMBS 16^{th} International Conference on Wearable and Implantable Body Sensor Networks 2019.
  - 25^{th} International Conference on Pattern Recognition (ICPR) 2020.