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Education

- MS., Clemson University, Computer Engineering: Intelligent Systems. 2018 - 2020
  Thesis - Segmentation and recognition of eating gestures from wrist motion using deep learning: Implemented a novel deep learning model for automatically detecting and classifying periods of wrist-motion activity that was recorded using inertial measurement unit (IMU) sensors into specific eating related gestures.
- MSc., Delft University of Technology (TU Delft), Electrical Engineering: Signals & Systems. 2014 - 2017
  Thesis - Intensity normalization in brain MRI images using machine learning: This project explored methods for transforming multi-scanner MRI images of individual patients into a common intensity-space. This is thought to be useful in follow-up diagnosis for patients that relocate to other places after serious health related conditions.
- B.E., Maharashtra Institute of Technology - Pune, Electronics & Telecommunication Engineering. 2008 - 2012

Courses & Projects

- Clemson University, Analysis of Tracking Systems. Aug. 2018 - Dec. 2018
  Studied and implemented models for predictive analysis on different datasets 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
  Conducted research on topics such as loss regularization, boosting and stochastic gradient descent as well as advanced topics including semi-supervised learning, multiple instance learning and reinforcement learning. Implemented a classifier that achieved 83.45% accuracy in predicting the income of a person based on census data.
- TU Delft, Digital Speech & Audio Processing. May 2015 - Jul. 2015
  This course introduced us to the fundamentals of the human hearing system, speech and audio coding systems and speech enhancement. Designed a system for far-end noise reduction in digital hearing aids by estimating statistical parameters of non-stationary noise and performing speech enhancement to produce clean and audible speech.

Experience

- Clemson University, Graduate Teaching Assistant. Jan. 2019 - May 2020
  Conducted the laboratory experiments for the course Logic & Computing Devices. These focused on teaching undergraduate students topics such as boolean logic design, circuit assembly and computer memory organization.
- Clemson University, Graduate Grading Assistant. Aug. 2018 - May 2020
  My assignments have included the courses Communication Systems and Signals & Systems for undergraduate engineering students and the course Analysis of Tracking Systems for graduate students.
- 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 low resolutions (256 x 256).
- Maharashtra Institute Of Technology, Co-Researcher. Feb. 2018 - Jul. 2018
  Assisted in research for deep learning models that could predict a score for the aesthetic quality of photos and videos. Also conducted coding sessions for undergraduate and graduate students in Python and TensorFlow.
- Climate Connect Ltd., Data Scientist. Aug. 2017 - Jan. 2018
  Was involved in data scraping & cleaning, software development and debugging of different projects. Implemented predictive models for forecasting trends in renewable energy data sets. My designed model had 36% better forecasting accuracy for predicting stock prices in the Indian Energy Exchange (IEX) for a period of four months.
- Cognizant Technology Solutions Pvt. Ltd., Engineer Trainee. Dec. 2012 - Oct. 2013
  Part of the team at the offshore development center associated with Lloyds Bank Plc. Supported the development team by monitoring mainframe servers, documenting daily job execution and reporting failure of critical jobs.

Technical Skills

- **Programming:** C (intermediate), MATLAB and Python (proficient). **OS:** Linux and Windows.
- **Tools:** Cygwin, GitHub, Keras, MSys2, numpy, OpenCV, pandas, PyTorch, System Programming, TensorFlow.