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Education

- MS., Clemson University, Computer Engineering : Intelligent Systems. Aug. 2018 - May 2020 (expected)
  Thesis - Segmentation and recognition of eating gestures from wrist motion using deep learning: The aim of this project is to develop a deep learning model for automatic segmentation and identification of eating related gestures based on wrist-motion data gathered from inertial measurement unit (IMU) sensors.
- MSc., Delft University Of Technology (TU Delft), Electrical Engineering : Signals & Systems. 2014 - 2017
  Thesis - Intensity normalization in brain MRI images using joint-dictionary learning: This project explored possible methods for transforming multi-scanner MRI images of individual patients into a common intensity-space using machine learning, which could be useful in follow-up diagnosis for patients that relocate to other places.
- B.E., Maharashtra Institute Of Technology - Pune, Electronics & Telecommunication Engineering. 2008 - 2012

Courses & Projects

- 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 designed a residual neural network architecture (ResNet) for identifying different categories of bullying and a separate category of non-bullying images, based on visual cues using Python and TensorFlow.
- Clemson University, Analysis of Tracking Systems. Aug. 2018 - Dec. 2018
  The assignments focused on predictive analysis on different datasets using techniques such as Linear and Non-Linear Regression. In addition Kalman Filter, Extended Kalman Filter, Particle Filter were studied for continuous sequential data, while Hidden Markov Models were analysed for discrete sequential data.
- TU Delft, Machine Learning. Mar. 2016 - Aug. 2016
  The coursework included theoretical 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. It was concluded with the Kaggle competition 'Final Assignment-IN4320'.
- 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. Our project focused on estimating statistical parameters of non-stationary noise and performing speech enhancement for producing clean and audible speech in digital hearing aids.

Experience

- Clemson University, Graduate Teaching Assistant. Jan. 2019 - Present
  Currently teaching the course Logic & Computing Devices for undergraduate engineering students.
- Clemson University, Graduate Grading Assistant. Aug. 2018 - Present
  My assignments have included the courses Communication Systems (current) 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 architecture known as Cyclic Conditional Generative Adversarial Networks (CC-GAN). Documented model performance using Pearson Correlation Coefficient, and achieved a mean similarity of 0.9 with target images at low resolutions.
- Climate Connect Ltd., Data Scientist. Aug. 2017 - Jan. 2018
  Majorly worked on forecasting day-ahead trading prices in the Indian Energy Exchange (IEX). My designed model had 36% better accuracy as compared to the previous approaches. Was also involved in the collection, cleaning and storage of training data as well as in the software development and debugging phases of other projects.
- Cognizant Technology Solutions Pvt. Ltd., Engineer Trainee. Dec. 2012 - Oct. 2013
  Part of the team at the Offshore Development Centre 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/ Python (proficient). **OS:** Linux/Windows & POSIX (Cygwin/MSYS2).
- **Tools:** GitHub, OpenCV, Keras, PyTorch, scikit-learn, TensorFlow, Visual Studio.