

## Education

- Master of Science, Clemson University, Computer Engineering. Aug 2018 - May 2020  
Conducted research on deep learning models for classifying wrist motion into different categories of eating gestures. The model correctly identified 77.7% of all gestures on average per meal from 488 meals eaten by 264 participants.  
**Focus:** Deep learning, human activity recognition (HAR), IMU sensors, tracking systems & system programming.
- Master of Science, Delft University of Technology, Electrical Engineering. Sep 2014 - Jan 2017  
My research explored machine learning techniques for 3D MRI image reconstruction in multiple modalities and intensity-spaces. It was aimed at improving the consistency of computer vision algorithms used in the diagnosis of MRI images.  
**Focus:** Machine learning, pattern recognition, signal & image processing.
- Bachelor of Engineering, University of Pune, Electronics & Telecommunication. Aug 2008 - May 2012  
**Courses:** Data structures & Algorithms, Digital signal & image processing, Neural networks.

## Experience <https://www.linkedin.com/in/yyl1109/>

- Clemson University, Graduate Grading Assistant and Graduate Teaching Assistant. Aug 2018 - May 2020  
Graded the courses Communication Systems, Signals & Systems (undergraduate) and Analysis of Tracking Systems (graduate). Also oversaw the laboratory work and final practical exam for the course Logic & Computing Devices.
- Clemson University, Department of Computer Science, Summer Employee. May 2019 – Aug 2019  
Conducted research on generative adversarial neural networks (GAN) for synthetically staining microscopy images. The model achieved mean similarity (Pearson correlation coefficient) of 0.9 with test images at 256 x 256 resolution.
- Maharashtra Institute Of Technology, Co-Researcher. Feb 2018 - Jul 2018  
Part of the team conducting research on deep learning neural networks for predicting an aesthetic score for images and videos. Trained engineering students in designing model workflows in Python, TensorFlow and Keras.
- Climate Connect Pvt. Ltd., Data Scientist. Aug 2017 - Jan 2018  
Implemented a machine learning model for improving the accuracy of day-ahead stock price prediction in the Indian Energy Exchange (IEX) by 36% for a period of four months.
- Cognizant Technology Solutions Pvt. Ltd., Engineer Trainee. Dec 2012 - Oct 2013  
Monitored job execution on mainframe servers, and reported failure of critical jobs to on-site development teams.

## Projects

- Clemson University, Analysis of Tracking Systems. Aug 2018 - Dec 2018  
Studied the theory of state-space models for filtering, signal denoising and object tracking for different time-series data. Algorithms implemented include Kalman filter, extended Kalman filter, particle filter and hidden Markov models.
- Delft University of Technology, Machine Learning & Kaggle In-Class Competition. Mar 2016 - Aug 2016  
Undertook research study on advanced topics like loss regularization, semi-supervised and multiple instance learning. Implemented the pipeline for predicting if a person's annual income would exceed 40,000 Euros with 83.4% accuracy.
- Delft University of Technology, Digital Audio & Speech Processing. May 2015 - Jul 2015  
Studied characteristics and limitations of various models for speech & audio coding and noisy channel estimation. Implemented a state-of-the-art algorithm for non-stationary noise estimation and speech enhancement in hearing aids.

## Technical & software development skills <https://github.com/Yashgh7076>

- **Programming:** Python & MATLAB (advanced), C (proficient). **OS:** Windows & Linux. **Tools:** MSYS2 & Git.
- **Libraries & APIs:** Keras, matplotlib, numpy, OpenCV, PyMySQL, PyTorch, scikit-learn, TensorFlow & Win32.
- **Volunteer Work:** Clemson University, Reviewer for:
  - IEEE - EMBS 16<sup>th</sup> International Conference on Wearable and Implantable Body Sensor Networks 2019.
  - 25<sup>th</sup> International Conference on Pattern Recognition (ICPR) 2020.