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Yadnyesh Y. Luktuke
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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
  Implemented a neural network model for classifying the script of handwritten text on postal envelopes for faster sorting.

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 of 0.9 with test images at 256 x 256 resolution and 0.78 at 2048 x 2048 full 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 machine learning models for forecasting trends in renewable energy data sets and energy-grid price prediction. Improved energy-price forecasting accuracy of the day-ahead model 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
  Implemented regression and state-space algorithms including Kalman filter, extended Kalman filter, particle filter and hidden Markov models for filtering, signal denoising and object tracking on multiple time-series data sets.

- Delft University of Technology, Machine Learning & Kaggle In-Class Competition. Mar 2016 - Aug 2016
  This course covered advanced topics such as loss regularization, semi-supervised and multiple instance learning. Implemented the model 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 an algorithm for noise reduction in digital hearing aids using frequency domain speech enhancement.

Technical & software development skills `https://github.com/Yashgh7076`

- **Programming:** C (intermediate), Python & MATLAB (advanced). **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^{th} International Conference on Wearable and Implantable Body Sensor Networks 2019.
  - 25^{th} International Conference on Pattern Recognition (ICPR) 2020.