Alok Anil Jadhav

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Education:

Fall 2019 - Fall 2021
The University of Utah, SLC, UT, USA- *Master of Science in Computing*

MS in Computing, Data Science Track | Currently enrolled (fall 2019) in grad level courses:
Machine Learning, Deep Learning, Independent Studies (Reservoir Computing).

Subjects for the spring 2020 semester: **Computer Vision, Data mining, Artificial Intelligence.**

AUG 2014 - MAY 2018
Shri Guru Gobind Singhji Institute Of Engineering And Technology, (India) - *Bachelor Of Technology*

Electronics and Telecommunication Engineering | GPA: 3.2/4.0 | Completed UG courses:
Pattern Recognition, Artificial Neural Networks, and Fuzzy Logic, Microprocessor and Controller, Digital Image Processing, Introduction to Robotics.

Skills:

- Python for Machine Learning
- C/C++
- HTML5
- Design of Machine/ Computer Vision algorithms
- Pattern Recognition and Data Analysis
- Understanding, development, and application of "Deep Learning Algorithms"
- Applied Recurrent Neural Networks, Convolutional Neural Nets, Spiking Neural Nets.
- Tensorflow, Scikit- Learn, PyTorch
- MATLAB
- Control System
- Microcomputer controlled systems
- Embedded Systems/Embedded C
- Robotics (Mechanism Development)

Experience:

Aug 2019 - PRESENT
The University of Utah, SLC, UT, USA – *Graduate Teaching Assistant*

- Graduate Teaching Assistant for Course " **'Foundations of Data Analysis"**

Aug 2019 - PRESENT
The University of Utah, SLC, UT, USA – *Independent research project*

- Graduate research project in '**Reservoir Computing'**.

June 2018 - April 2019
Computer Vision and Pattern Recognition Lab (SGGSIE&T), Nanded (India) - *Research Assistant*

- Designed, Developed, and Applied Machine Learning algorithms for Computer vision challenges, Image understanding, and Interpretation. Transfer Learning applied to the InceptionV3 algorithm - **95%** classification accuracy was achieved.

July 2017 - Dec 2017

GSI Helmholtz Center For Heavy Ion Research GmbH, Darmstadt, HE (Germany) - *Research Student*

- One of the 35 Students from Europe, USA, and Asia | Completed and Submitted final year thesis on the application of Machine Learning Regression |Designed, developed and tested different Machine Learning Regression Algorithm for correcting the errors of IPM device which is used in the particle accelerator labs (GSI, CERN, FAIR)- **99%** Prediction Accuracy was achieved. (Accuracy with Traditional methods- 90%)

JULY 2016 - AUG 2016

Indian Institute Of Technology Roorkee, Roorkee (India) - *Research Intern*

- Area of Computer Vision: Handwriting recognition by using HMM (Hidden Markov Models): studies and applied different Machine Learning Algorithms to the same problem (such as SVM, Logistic Regression) and compared the results. - Similar Results achieved as a state of the art Deep Learning Models- **92%** accuracy was achieved.

NOV 2015 - JAN 2016

Indian Institute Of Technology Roorkee, Roorkee (India) - *Research Intern*

- Area of Computer Vision: Handwriting recognition by using HMM (Hidden Markov Models): studies and applied different Machine Learning Algorithms to the same problem and compared the results. - **90%** classification accuracy was achieved.

Publications:

- International conference on advances in civil & mechanical systems, held at Government College of Engineering, Amravati: Modular programmable matter based mechanical & electromagnetic system. (2014)
- International conference on CVIP (computer vision & image processing) at IIT Roorkee: Hand Gesture Recognition with Dynamic Time Warping using Microsoft Kinect Sensor. (2016)
- International Conference on Electrical & Electronics Engineering (ICEEE) Pune: Design of Digitally Controlled Power Board for generating a coded pulse from the laser diode array (2016)
- IEEE IC3NS, Rajasthan (Won The Best Paper Award in data analysis section): Model-driven Dashboard for Real-time Data Monitoring and Analysis (2018)
- IEEE IC3NS, Rajasthan (Won The Best Paper Award in Machine Learning and Artificial Intelligence section): Application of Machine Learning for profile Reconstruction of IPM device (2018)
- International Journal of Electrical, Electronics & Computer Science Engineering: Emotion Acknowledgment in light of EEG Highlights in Motion Picture Clips with Channel Determination by MLPNN (Multilayer Perceptron Neural Network) (2017)
- Patent Pending: Wireless electricity transfer through electromagnetic wave phenomenon: 3893/MUM/2014.

Personal Projects:

- Diabetic Retinopathy: Disease, Macula, and Optical Disk detection using Inception-V3 CNN (Convolutional Neural Nets) in Tensorflow [by Transfer Learning technique]
- Optimization of the digital circuit board using tree search algorithms.
- Trajectory forecasting of projectile objects: Using RNN (Recurrent Neural Nets)
- Self-balancing bike by using the mechanism of the gyroscopic effect.