Vamshi Kumar Kurva

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Info

Website https://vamshikumarkurva.github.io/

Github https://github.com/vamshikumarkurva

Stack overflow https://math.stackexchange.com/users/688895/vamshi-kumar-kurva

Education

2015–2017 **Indian Institute of Space Science and Technology, Kerala**
M.Tech in Machine Learning and Computing, *CGPA* – ***9.1/10 (Rank1 in class)***
- **Relevant courses:** Pattern Recognition and Machine Learning, Reinforcement Learning, Neural Networks, Data Mining, Matrix Computations, Applied Statistics, Optimization Techniques, Computer Modeling and Simulations, Discrete Mathematics

2010–2014 **Sree Nidhi Institute of Science and Technology, Hyderabad**
B.Tech in Electronics and Communication Engineering , *Score* – ***84%***
- **Relevant courses:** Microprocessors, Digital Electronics and Logic Design, Analog and Digital communication systems, Digital Signal Processing

2008-2010 **Sri Chaitanya Junior College, Hyderabad**
Higher Secondary Education, *Score* – ***96.5%***
- **Major:** MPC (Maths, Physics, Chemistry)

2002-2008 **A.P.Residential High School, Keesaragutta, Hyderabad**
Secondary Education, *Score* – ***93.8%***
- **Major:** General studies

Industrial Projects

2019-2020 **Bulk Email clustering and classification(At FireEye Cyber Security)**
- Developed a clustering mechanism to group similar emails together using ML and graph based techniques.
- Also developed a simple classifier to map an email into existing clusters.

2018-2019 **Deep Neural Network for Malware classification(At FireEye Cyber Security)**
- Developed a Deep Neural Net Based static Malware Classifier for the Advanced Threat Defense Research Team.
- Model has less FP rate and currently in production.

2017-2018 **Phishing Detection and classification using DNN (At FireEye Cyber Security)**
- Developed a CNN model that classifies the given URL as clean or one of the phishing brands.
- Leveraged on transfer learning for faster training. Model currently in production.

2016-2017 **Domain Oriented Conversational Agent(At Philips Lighting Pvt Ltd) (M.Tech Thesis) [Thesis Report]**

- Built a Seq2Seq model that can map questions to answers.
- Used LSTM based Encoder-Decoder model
- Experimentally verified the performance of different Seq2Seq models on standard datasets

2014-2015 **2DFFT implementation on images (At Auviz Systems India Pvt Ltd)**

- FFT is the fast implementation of DFT and works well when the number of samples are in the powers of two.
- Came up with an algorithm for applying 2DFFT on image instead of applying 1D-FFT on rows of the image and then on the columns of the image successively

Independent Course work

2018 **Deep Reinforcement Learning(UC Berkley Fall 2017) [code]**

- Contributed to a Github repository for the study and analysis of some Deep RL techniques.
- Worked on simulated environments like OpenAI gym, Opensim.
- Participated in *NIPS 2018: AI for prosthetics* challenge.

2015 **Machine Learning(Andrew Ng's course, Coursera) [code]**

- Contributed to a GitHub repository with basic ML algorithms implemented in MatLab.
- Gained a verified certificate from Stanford University **[certificate]**

Publications

2019 **2D FFT without using 1D FFT [paper]**

- Published at *International Journal of Innovative Science and Research Technology*

2018 **Epidemic outbreak prediction using Artificial Intelligence [paper]**

- Published at *International Journal of Computer Science Information Technology*

Academic Projects

2016 **Image Compression using 2DPCA**

- 2DPCA works on images directly without transforming images into 1-Dimensional vectors. Algorithm is implemented using python and openCV, and the results are verified on face dataset and performance is compared to the conventional PCA.

Talks

March 2016 Seminar talk on **"Singular Value Decomposition(SVD)"** at IIST

Technical Skills

Programming Languages	C, C++, Matlab, Octave, python
Operating Systems	GNU/Linux(CentOS, Ubuntu), Ms Windows XP/7
Software Packages	LaTeX, OpenCV, TensorFlow, OpenAI Gym, Mujoco, Scikit-learn