

Vamshi Kumar Kurva

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Info

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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

- 2017–2018 **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. It is observed that using 2DPCA, efficiency and performance are improved compared to 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	L ^A T _E X, OpenCV, TensorFlow, OpenAI Gym, Mujoco, OpenSim

References

Available upon request