SHANGETH *RAJAA*

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Education

- **BITS Pilani**, India – B.E Electrical and Electronic Engineering,
  M.Sc Mathematics (May 2021).

Work Experience

- **Incoming Research Intern -** IBM Research Labs, India.(May 2020 - July 2020)
- **ML Facilitator & Instructor -** Google Explore ML Academy at Google AI, India. (July 2019 - Present)
  - Developed and taught deep learning courses with Google AI.
- **Research Collaborator -** Remote research collaborator under Dr.Isabelle Guyon at INRIA, Paris. (March 2019 - Present)
  - research and development of competitions and baselines for the AUTODL Project for NIPS, 2019.
- **Google Code-In Mentor -** Tensorflow**,** Google AI.(Nov 2019 - Feb 2020)
- **Deep Learning and Computer Vision Content Developer Intern -** OpenCV.org. (May 2019 - Sep 2019)
  - Developed course content and projects for deep learning courses of OpenCV.org
- **AI Developer -** OpexAI, Hyderabad, India. (Sept 2018 - Oc, 2018)
  - Data gathering & processing| DL model| Transfer learning|Model to Product Pipeline for SDC.
- **Software Developer -** KGLLP Fintech, Bangalore, India. (July 2018 - Nov 2018)
  - Developed Software pipelines for an end to end data processing for financial data and deep learning for finance stock prediction.
- **Computer Vision Developer -** Science and Technology Center, Chennai. (May 2018 - Jul 2018)
  - Developed Computer Vision Security System for the center using Classical Machine learning models.

Publications and Conferences

- ***Rajaa S****., Sahoo J.K.* (2019) Convolutional Feature Extraction and Neural Arithmetic Logic Units for Stock Prediction. Advances in Computing and Data Sciences. ICACDS 2019. Communications in Computer and Information Science, vol 1045. Springer, Singapore. [Link]
- Overview and unifying conceptualization of Automated Machine Learning. *Zhengying Liu, Zhen Xu, Meysam Madadi, Julio Jacques Junior, Sergio Escalera,* ***Shangeth Rajaa*** *and Isabelle Guyon.*[paper]
- Towards Automated Deep Learning:Analysis of the AutoDL challenge series 2019. *Zhengying Liu, Zhen Xu,* ***Shangeth Rajaa,*** *Meysam Madadi, Julio Jacques Junior, Sergio Escalera and Isabelle Guyon. Submitted to Proceedings of Machine Learning Research, NeurIPSCD 2020.*

Research

- Speech Representations with Information theoretical approaches under Dr.Ashwin Srinivasan.
- Deep Reinforcement with Symbolic Constraints under Dr.Ashwin Srinivasan.
- Speech Recognition, Text to speech with a single semi-supervised learning Generative Models for lack of task-specific labeled data under Dr.Ashwin Srinivasan.
- Neural Arithmetic Logic Units for time series prediction under Dr.JK Sahoo.

Skills

● Python, C, C++ ● PyTorch, Tensorflow, Keras ● Computer Vision ● Natural Language Processing ● Deep Reinforcement Learning	● FrontEnd : HTML,CSS,JavaScript ● Backend: Python(Flask, Django) ● Version Control System ● Raspberry Pi, Arduino ● Cloud Computing

Talks and Volunteering

- Talk on Computer Vision - Google India, Hyderabad, India.
- Talk on Multitasking learning for Face characterization - Online Presentation with FaceBook AI and Udacity.
- Talk on Convolutional Feature Extraction and Neural Arithmetic Logic Units for Stock Prediction at ICACDS 2019.
- Mentor - Udacity Pytorch Deep Learning Nanodegree.

Achievements

- Deep Learning and Deep Reinforcement Learning Nanodegree.
- FacebookAI's Secure and Private AI Scholar and Pytorch Deep Learning Scholar.
- KPIT's Autonomous Tech Scholar.

Projects (all the projects are available at GitHub)

- Question Answering with Bidirectional Encoder with Bidirectional Encoder Representations from Transformers.
- Seq2Seq Model for Neural Machine Translation.
- Text generating Recurrent Neural Network.
- Information Maximizing Deep Generative Networks.
- Policy-based RL methods
- Lunar Lander with Deep Q Network and its variants.
- Mountain Car with Temporal Difference methods
- Monte Carlo Prediction methods
- Pneumonia Diagnosis with Deep Learning
- Domain Transfer using Generative models (Images and Speech)
- Multitask Learning for Face characterization
- Self Driving Cars steering angle prediction
- Deep Learning for signature verification
- Hand Gesture Recognition with Deep Learning
- Vehicles and Pedestrian detection for self-driving cars
- Traffic Sign Recognition for Self Driving Cars
- Twitter Sentiment Analysis
- Computer Vision Security System