Sharad Chitlangia

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EDUCATION

BITS PILANI
B.E. in Electronics and Instrumentation Engineering
Expected May 2021 | Goa, India
Cum. GPA: 7.9

LINKS

Github:// **Sharad24**
LinkedIn:// **sharadchitlangia**
Twitter:// **sharad24sc**
Scholar:// **sharadchitlangia**

VOLUNTEER WORK

- Deep Learning | Course Instructor
- Galaxy Classification using Neural Networks | Guide and Mentor
- Reinforcement Learning | Course Instructor
- Language Research Group | Mentor and Member

SKILLS

Languages Python, C++, Java, Julia, Shell
Technologies Git, LaTeX, Heroku, AWS, GCP, Git, Travis CI
Frameworks Pytorch, Tensorflow

AWARDS

Bounty Prize Winner - 500$
Hack InOut

OTHER EXPERIENCES

- President | Society for Artificial Intelligence and Deep Learning (http://saidl.in)
- Panel Coordinator - Programmer's Inc | Quark 2020
- Intel AI Student Ambassador

COURSEWORK

Machine Learning*, Neural Networks and Fuzzy Logic*, Data Mining*, Probability and Statistics, Digital Image Processing, Digital Signal Processing, Microprocessors and Interfacing, Digital Design, Stanford's CS231n@, UCB's CS295@, Stanford's CS224n@, Stanford's CS229@. (* = Auditing, @ = Online)

EXPERIENCE

HARVARD UNIVERSITY | EDGE COMPUTING LAB

June 2019 - August 2019 | Vising Undergraduate Research Intern
Cambridge, MA, USA

- Worked on Deep Reinforcement Learning for Energy Constrained Embedded devices like UAVS.
- Accelerating RL algorithms for deployment. >350 experiments in QuaRL. Showed policies can be quantized to 6-8 bits of precision without loss of accuracy. Quantizing can give upto 18x increase in speedup in Decision Control loop
- Demonstrated advantages of Quantization during training on policies - higher exploration and generalization, faster training by upto 60%, etc.

GOOGLE SUMMER OF CODE | CERN-HSF

May 2019 - August 2019 | Remote Intern

- Developing and Porting of 3 Track Reconstruction Algorithms exposed in TrackML Competition into ACTS Framework
- Added an example of running Pytorch models in ACTS using Pytorch's C++ frontend libtorch.

UNFOUND.AI

May 2018 - August 2018 | Machine Learning Intern
Mumbai, India

- Revamped Information Retrieval System using Distributional semantics.
- Trained embeddings(ELMO) from a deep learning based model which could capture Semantic, Syntactic as well as Contextual information.
- Training stance detection models(ESIM) to detect if two pieces of articles have the same view points regarding a particular topic.

PUBLICATIONS

- **QUANTIZED REINFORCEMENT LEARNING - QUARL**
  Srivatsan Krishnan*, Sharad Chitlangia*, Max Lam*, Zishen Wan, Aleksandra Faust, Vijay Janapa Reddi
  Under review. Arxiv, Code

SELECTED PROJECTS

- Spiking Neural Networks | Report
- Pneumonia Detection using Deep Learning with TCS Research | Code
- Neural Voice Cloning with Few Samples | Code
- Autonomous Drone Navigation using Deep Reinforcement Learning | Project Lead | Funded Project | Code
- Particle Track Reconstruction using ML | Code, Report
- Epileptic Seizure detection using Deep Learning | Code, Report
- Human Swarm Intelligence for Reconnaissance | Official Collaboration with Defence Research and Development Organisation, Govt. of India