

Sharad Chitlangia

<http://sharad24.github.io>
sharadchitlangia24sc@gmail.com | +91 98922 19249

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
 Accepted at the 1st Workshop on Resource Constrained Machine Learning at MLSys.
 Arxiv, Code

SELECTED PROJECTS

- **Causal Attribution in Neural Networks** with TCS Research
- **Spiking Neural Networks** | Report
- **Neural Voice Cloning with Few Samples** | Code
- **Pneumonia Detection using Deep Learning** with TCS Research | 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