Het SHAH

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💼 EXPERIENCE

Present **May 2020**	Remote Collaborator, IAS LAB, TU-Darmstadt > Working on a project to segment out human motion sequences, with a dataset consisting of human-object interactions 〔Segmentation〕 〔Human-Object Interaction〕
Present **January 2020**	Undergraduate Researcher, APPCAIR, BITS Goa github.com/Het-Shah/IKD_DAFL > Worked on a project titled "Iterative Knowledge Distillation on Data-Free Learning", done in collaboration with TCS-Research. > Project aims to find an iterative method to perform Knowledge Distillation on Data Free Learning model. > Modified the loss function for the Knowledge distillation part. 〔Knowledge Distillation〕 〔Model-Compression〕 〔Generative models〕 〔Unsupervised Learning〕
July 2019 **May 2019**	Summer Research Intern, BISAG, Gandhinagar github.com/Het-Shah/Texture-segmentation | Report > The project, titled "Texture Segmentation", aimed at creating a Semantic Segmentation model for locating agricultural patterns specific to Horticulture. > Created a novel Remote Sensing dataset from scratch which could be used by research groups for further study and constructed a U-Net model using Keras after considering and experimenting with several other algorithms. 〔Semantic Segmentation〕 〔U-Net〕

💻 PROJECTS

GENRL   APRIL 2020 - PRESENT
 github.com/SforAiDl/genrl
> GenRL is a PyTorch reinforcement learning library centered around reproducible and generalizable algorithm implementations.
> Currently the library has implementations of major Deep and Classical Reinforcement learning algorithms.
> I have contributed to the DQN and VPG agents on the deep RL side and SARSA on the classical RL side. I have also contributed to vectorised Environments
〔Pytorch〕 〔Reinforcement-Learning〕

KD-LIB   MAY 2020 - PRESENT
 github.com/SforAiDl/KD_Lib
> I am the lead for this library, that will help extend all Knowledge Distillation works, and benchmark some of the best papers in the domain of Knowledge Distillation.
> Currently the library holds implementations of some of the famous papers like Teacher Assisted Knowledge Distillation, Relational Knowledge Distillation, Distilling from Noisy Teachers.
〔Pytorch〕 〔Knowledge-Distillation〕 〔Model-Compression〕

Meme Classification for combating online hate   November 2019

Report
> Built a multi-modal model to classify memes into various tasks.
> The model used an Inception-ResNet-v3 for extracting the features of the images of the meme and a GRU network on top of Glove Embedding with Attention.

Multi-Task Learning   Multi-Modal Learning

Instrument GAN   August 2019 - November 2019

Report
> Project completed as a formal project under Prof. Sujith Thomas.
> Successfully generated music using a Generative Adverserial Network, based on the paper MuseGAN.

Generative Networks   GAN

Publications

2020   *Ashwin Vaswani, Rijul Ganguly, Het Shah, Sharan S. Ranjit, Shrey Pandit, and Samruddhi Bothara*. An Autoencoder Based Approach to Simulate Sports Games. *7th Workshop on Machine Learning and Data Mining for Sports Analytics at ECML-PKDD 2020*

Skills

Programming Languages	Python , C++ , C, JAVA, JavaScript, MySQL
Frameworks	PyTorch, Tensorflow, Keras, ReactJS, NodeJS, ExpressJS
Cloud	AWS, GCP

Teaching and Mentoring

November 2019
August 2019

Instructor - Introduction to Python for development and Data Analytics, CTE, BITS Goa
> Taught basics of the python language and its various applications in fields like data analytics, web scraping, game dev.
> The class comprised of 100 students who were in their freshman year and some higher degree students.

Python   Numpy   Pandas   Django   github

July 2019
May 2019

Instructor - Introduction to Deep Learning, QSTP, BITS Goa
> Taught basics of Deep Learning and used PyTorch to create both challenging yet doable assignments for the participants.
> The class comprised of 120 students who had just completed their freshman and sophomore years at college of which 40 successfully completed the final project.

Pytorch   Machine Learning   Deep Learning   Python   Numpy   Pandas   Matplotlib

Certifications

2019   Deep Learning Course by DeepLearning.ai. (Certificate)
2017   A basic course on Networking by Nettech. Secured 10th rank among 142 participants (Certificate)

Outreach and Volunteering

2020 - Present   Vice President of Society For Artificial Intelligence and Deep Learning
2017-2020   Core member of Abhigyaan - NGO