

Het Shah

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EDUCATION

BITS PILANI, GOA CAMPUS

Jul 2021

B.E. IN COMPUTER SCIENCE

UDGAM SCHOOL

May 2017 | HSC

Percentage: 91%

D.A.V. INTERNATIONAL SCHOOL

May 2015 | SSC

CGPA: 9.80 / 10.0

SUMMER SCHOOLS

GOOGLE AI RESEARCH SUMMER SCHOOL

Aug 2020

Among 150 students selected.

Selected in HCI and *AI4SG* track

COURSEWORK

Neural Networks and fuzzy logic

Machine Learning

Data Structures and Algorithms

Logic in Computer Science

Linear Algebra

Advanced Calculus

Probability and Statistics

Differential Equations

CERTIFICATION

DeepLearning.ai | (Certificate)

Nettech (top 10) | (Certificate)

SKILLS

PROGRAMMING

Python • C++ • C • JAVA

JavaScript • MySQL

FRAMEWORKS

PyTorch • Tensorflow • Keras

ReactJS • NodeJS • ExpressJS

CLOUD

AWS • GCP

VOLUNTEERING

Abhigyaan - NGO

Vice President - Society for Artificial Intelligence and Deep Learning (SAIDL)

EXPERIENCE

MICROSOFT RESEARCH | RESEARCH INTERN

Jun 2021 - Present

- Investigating the use of program synthesis to solve reasoning based tasks, with current focus on Bongard-LOGO.

ESOWC, ECMWF | SUMMER INTERN

May 2021 - Aug 2021 | Certificate, Final Presentation

- Worked on learning a mapping from ERA5 model simulations to satellite observations for Maximum Skin Temperature.

VISUAL COMPUTING LAB (VCL) IISC, BANGALORE | RESEARCH INTERN

Dec 2020 - Jun 2020 | Thesis Report

- Worked on a novel problem of investigating **Incremental Learning for Pose Estimation**. Developed a new sampling strategy for building the **exemplar memory** using RBF k-DPP.
- Further developed an **Image Warping Augmentation** strategy to augment the exemplar memory.

APPCAIR, BITS GOA | UNDERGRADUATE RESEARCH COLLABORATOR

Jan 2020 - Jan 2021

- Worked on probing the use of **Transformers** for simple algorithmic approximations and **iterative knowledge Distillation** for Data Free Learning.
- Work done in collaboration with TCS-Research.

PROJECTS

KD-LIB

May 2020 - Present | Links: Project, Pre-Print

- A Pytorch Library that will help extend major works for **Knowledge Distillation, Pruning and Quantization**.
- Project lead** for this library, which currently has **290+** stars.

GENRL

Apr 2020 - Sep 2020 | Links: Project

- GenRL is a PyTorch based **Reinforcement Learning** library centered around reproducible and generalizable algorithm implementations
- Contributed to the **DQN, VPG** and **SARSA** agents, and **vectorized Environments**.

TEACHING EXPERIENCE

DEEP LEARNING - TEACHING ASSISTANT NEUROMATCH ACADEMY

Aug 2021 | Certificate, Website

- Created content for the topic of "Out of Distribution Learning" and TA for projects and tutorials.

MACHINE LEARNING - TEACHING ASSISTANT (BITS F464)

Aug 2020 - Dec 2020 | Certificate

- Responsible for conducting **lab sessions** and designed the **project assignments** for 120 undergraduate students.

PUBLICATIONS

- G. K. Nayak, H. Shah, and A. Chakraborty. Incremental learning for animal pose estimation using rbf k-dpp. *British Machine Vision Conference (BMVC)*, 2021.
- H. Shah, A. Vaswani, T. Dash, R. Hebbalaguppe, and A. Srinivasan. Empirical study of data-free iterative knowledge distillation. In *Artificial Neural Networks and Machine Learning - ICANN 2021*, pages 546–557, Cham, 2021.
- A. Vaswani, R. Ganguly, H. Shah, S. R. S, S. Pandit, and S. Bothara. An autoencoder based approach to simulate sports games. *7th Workshop on Machine Learning and Data Mining for Sports Analytics at ECML-PKDD 2020*, 2020.