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 Fellow
Jun 2022 - Present
- Working with the PROSE team on developing a skill for **code edits for dotnet migration** for the **Copilot X** project in Visual Studio.
- The project aims to use semantic and syntactic information from the compiler to predict the edits.

MICROSOFT RESEARCH | Research Intern
Jun 2021 - May 2022
- Investigated the use of program synthesis based neuro-symbolic models for representing the image data.
- Explored the effectiveness of such models for extracting tables from chart images.

ESOWC, ECMWF | Summer Intern
May 2021 - Jun 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 2021 | 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 alogrithmic 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 **450+** 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

Teaching Assistant for Deep Learning - Neuromatch Academy   Teaching Assistant for Machine Learning course - BITS Goa

PUBLICATIONS

[1] G. K. Nayak, H. Shah, and A. Chakraborty. Incremental learning for animal pose estimation using rbf k-dpp. *British Machine Vision Conference (BMVC)*, 2021.

[2] 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.