

Apoorva V. Singh

GRADUATE TRAINING CENTER OF NEUROSCIENCE · EBERHARD KARLS UNIVERSITY OF TÜBINGEN

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Education

Eberhard Karls University of Tübingen

MASTER OF SCIENCE IN NEURAL INFORMATION PROCESSING (GRADUATE TRAINING CENTER OF NEUROSCIENCE)

Oct. 2021 - Aug. 2023 (Expected)

National Institute of Technology Silchar, India

BACHELOR OF TECHNOLOGY IN ELECTRICAL ENGINEERING

Overall GPA: 8.06

Aug. 2017 - June. 2021

City Montessori School, Lucknow, India

INTERMEDIATE SCIENCE (PHYSICS, CHEMISTRY, MATHEMATICS)

Percentage: 91.6%

May. 2014 - June. 2016

Experience

Brown University

RESEARCH INTERN

Rhode Island, United States

Jan. 2021 - Dec 2021

- Worked under Prof. George Em Karniadakis and Dr. Mengjia Xu (Brain and cognitive sciences, MIT)
- Worked on DynG2G: A New Stochastic Dynamic Graph Embedding Model which is an unsupervised dynamic graph embedding technique that generates node embedding in the form of a multivariate gaussian distribution

Google Summer of Code

STUDENT DEVELOPER

Machine Learning for Science
(ML4Sci)

June. 2021 - Aug 2021

- Worked on the project Equivariant Neural Networks for Dark Matter Morphology with Strong Gravitational Lensing under Prof. Sergei Gleyzer and Michael Toomey.

Max Planck Institute for Dynamics of Complex Technical Systems

GUEST RESEARCHER

Magdeburg, Germany

Jun. 2020 - Feb. 2021

- Worked under Prof. Peter Benner and Dr. Pawan Goyal in the research group Computational Methods in Systems and Control Theory.
- Worked on projected gradient descent method for inverse imaging problems using deep learning.

University of Hyderabad

UNDERGRADUATE RESEARCH INTERN

Hyderabad, India

May. 2019 - July. 2019

- Worked in Artificial Intelligence (AI) Laboratory, UoH, under Prof. Atul Negi, School of Computer and Information Sciences.
- Worked on developing efficient drug repositioning techniques by using ontological medical data and medical text corpus

Roghaari

MACHINE LEARNING ENGINEER

Silchar, India

Dec. 2017 - Aug. 2018

- Worked to develop a deep learning based engine that analysed the client's monthly health data to anticipate any health risks.

Publication

Apoorva Vikram Singh, Geroge Em Karniadakis, Mengjia Xu. "DynG2G: An Efficient Stochastic Graph Embedding Method for Temporal Graphs" *Under Revision at Transactions on Neural Networks and Learning Systems, IEEE*

Apoorva Vikram Singh, Atul Negi. "Towards better Drug Repositioning using Joint Learning". *2019 IEEE 16th India Council International Conference (INDICON)*

Apoorva Vikram Singh, Thoudam Doren Singh, Divyansha, Abdullah Khilji. "A Hybrid Classification Approach using Topic Modeling and Graph Convolution Networks" *International Conference on Computational Performance Evaluation (ComPE)*. IEEE, 2020.

Apoorva Vikram Singh, Thoudam Doren Singh, Divyansha, Anubhav Sachan, Abdullah Khilji. "Debunking Fake News by Leveraging Speaker Credibility and BERT" *Accepted at IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology (WI-IAT'20)*

Apoorva Vikram Singh, Thoudam Doren Singh, Abdullah Khilji, Divyansha, Surmila Thokchom, Sivaji Bandyopadhyay. "Predictive Approaches for the UNIX Command Line: Curating and Exploiting Domain Knowledge in Semantics Deficit Data" *Multimedia Tools and Applications*, Springer

Key Courses Undertaken

Computer Science: Deep learning (5 course specialization by deeplearning.ai on Coursera) , Machine Learning (Course by Stanford on Coursera), Data Structures and Algorithms (NPTEL), Introduction to Machine Learning (NPTEL), Signals and Systems.

Mathematics and Statistics: Calculus, Linear Algebra, Differential Equations, Probability and Statistics.

Academic Achievements

2020	Accepted as a scholar Qubit by Qubit's Introduction to Quantum Computing	<i>The Coding School and IBM Quantum</i>
2019	Finalist in Smart India Hackathon organized by Ministry of Human Resource Development	<i>NIT Warangal</i>
2020	Innovation and Entrepreneurship Development Centre (IEDC) Grant Winner for the project "Deep Reinforcement Learning (DRL) Based Liquid Lens Auto-Focus system"	<i>NIT Silchar</i>
2020	Undergraduate Research Council (UGRC) Grant Winner for the project "AssistiveMRI: A deep learning approach to Medical Image Processing"	<i>NIT Silchar</i>

Technical Strengths

Computer Languages	Python, MATLAB, C/C++
Software and Tools	Latex, Git, Vim
Data Analysis, ML, DL	Pytorch, Keras, scikit-learn, NLTK, OpenCV