

Tezuesh Varshney

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EDUCATION

- **Zakir Husain College of Engineering and Technology** Aligarh Muslim University, Aligarh
Bachelor of Technology in Computer Engineering ; CGPA: 9.216/10.0 Aug. 2016 – Sept. 2020
- **Sayyid Hamid Senior Secondary School** Aligarh Muslim University, Aligarh
Senior Secondary School; Percentage: 88.8% July 2014 – May 2016

RESEARCH AND EXPERIENCE

- **Machine Learning Lab | Indian Institute of Science** July 2020 - Present
Research Internship under the supervision of Prof Chiranjib Bhattacharyya
 - Working towards developing high resolution images while following the narrative of disentanglement theory.
- **Indian Institute of Technology, Hyderabad** June 2019 - August 2019
Research Internship under guidance of Dr. Aditya Siripuram
 - Worked on attacking and generating probable dataset given a black box image classifier using Generative Adversarial Network (GAN) and their stability.
- **Autonomous Underwater Vehicle Club | Aligarh Muslim University** Sept. 2018 - Sept. 2019
 - Developed an Intelligent Agent to facilitate the control, dynamics, and vision of Underwater Vehicle.
 - Mapped underwater environment using a camera, pressure sensor, and IMU sensor.

PROJECTS

- **Analogy Generation:** August 2019 - January 2020
Working on understanding and generating analogy given a context, advised by **Prof. M. M. Sufyan Beg**.
 - Understanding how semantic knowledge interfaces with human cognition and how these systems are recruited during language learning.
 - Working on knowledge graph to provide a reasoning ability to machines.
- **3D Point Cloud Modeling:** April 2020 - May 2020
 - PyTorch implementation of Learning Representations and Generative Models for 3D Point Clouds
 - Generative Modeling on ShapeNet dataset using Autoencoder and GANs
- **Apery:** August 2018 - November 2018
Implemented algorithms to generate artistic images, advised by **Prof. Mohammad Sarosh Umar**
 - Applied transfer learning using pre-trained model VGG-19 to stylize an image into other.
 - Used Hill Climbing algorithm to regenerate Images using basic primitives.
- **Document Analysis using Graph Convolution Network:**
 - Build a global heterogeneous graph for representation of words and documents for 20 Newsgroups dataset.
 - Implemented a two-layer Graph Convolution to categorize the document in one of 20 given classes.
- **Zero-Shot Learning and its application:** February 2019 - April 2019
A survey based project to explore resource bound reasoning and learning its applications.
 - Conceptualized Zero-Shot Learning framework and learning what, why's and how's of the framework.
 - Learning about the applications in Video Localization, Neural Machine Translation and Generative Adversarial Networks.

SKILLS

- **Languages:** Python, Javascript, C++, SQL, Java
- **Frameworks:** Keras, Tensorflow, PyTorch, scikit-learn, OpenCV, ROS, MySQL, ThreeJS, p5.js, plotly.py
- **Tools:** Git, Vim, zsh, ipython, jupyter, L^AT_EX

AWARD AND ACTIVITIES

- Won **HackData 2019** 24-hr long hackathon organised by Shiv Nadar University
- Amongst **25** students, throughout the University, to be awarded with Sir Syed Global Scholar Award 2019
- Ranked **4 among 128 teams** in Autonomous Underwater Vehicle Competition **NIOT SAVe 2019** organised by **IIT-Madras**.
- Qualified as best team from AMU for **ACM-ICPC Online Round 2017-18**.
- Established **AMU-OSS** an Open Source Software (OSS) Society in college which now has more than 150 students.
- Qualified **Google CodeJam 2018** and **SnackDown 2018** and have scored at programming contests.
- **Contributor** at Oppia foundation and OpenGenus Foundation.
- Taught underprivileged students at **Mantra4Change**, a Bengaluru based NGO.
- Volunteered at **eVidyaloka Organization**, which provides remote classroom and link students and teachers.
- **Hobby:** Solving Combinatorics problems, Football, Photography.