

Rishav MUKHERJI

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EDUCATION

BITS-Pilani, K.K. Birla Goa Campus

B.E. ELECTRONICS & COMMUNICATION

2020 - 2024(Expected)

- Current CGPA - **9.21**

PROJECTS

- **Comparative study of Machine Learning techniques in Computer Vision** **GitHub** 2021
INDEPENDENT PROJECT
Built supervised (**ResNet**), semi-supervised (**Vanilla CNN** with **pseudo labelling**) and unsupervised (**SimCLR**) models to carry out classification on STL-10 dataset and compared their functionality and effectiveness based on various parameters.
- **Natural Language Inference and Probing** **GitHub** 2021
INDEPENDENT PROJECT
Trained a **BiLSTM** Classifier on SNLI dataset to carry out inference and then analysed the model by carrying out probing based on **POS tags**
- **VFormer** **GitHub** 2021 - Ongoing
CLUB PROJECT, SAIDL
A **PyTorch** library which packages implementations of different kinds of **ViTs** and methods to visualize their attention maps, and provides an **easy-to-use API**.
- **RoDeO** 2021-Ongoing
CLUB PROJECT, ERC
Object detection in robots based on **3D Perception** with **State Estimation** and **Localization**
- **Code Synthesis** 2022-Ongoing
INDUSTRY PROJECT
Developing a model for carrying out **Code Search**, **Syntax Error Detection** and **Code Repair** on **C** programming language
- **Developing ML-DL models for IoT-based applications** 2022-Ongoing
SUPERVISED PROJECT
Setting up a LoRaWAN based IoT network for emergency messaging system and then using various ML-DL techniques to optimise the network and utilise it for wider purposes

COURSE WORK

ACADEMIC	Computer Programming Linear Algebra Calculus Probability & Statistics Meta Learning Control Systems
ONLINE	University of Michigan: Python 3 Programming Specialization Stanford University: Machine Learning Udacity: Intro to Deep Learning with PyTorch NVIDIA: Fundamentals of Deep Learning DeepLearning.AI: NLP Specialization NVIDIA: Building Transformer-Based NLP Applications Stanford University: CS231n University of Toronto: Visual Perception for Self-Driving Cars University of Toronto: State Estimation and Localization for Self-Driving Cars

TEACHING EXPERIENCE

- **Introduction and Applications of Machine Learning** Nov 2021 - Ongoing
INSTRUCTOR, CENTER FOR TECHNICAL EDUCATION, BITS GOA **WEBSITE**

SKILLS

PROGRAMMING LANGUAGES	Experienced: Python C++ C Familiar: Julia Java
FRAMEWORKS	PyTorch Keras Scikit-learn Tensorflow
LIBRARIES	Numpy Pandas OpenCV Matplotlib
TOOLS	GIT Arduino IDE
MISCELLANEOUS	English Hindi Bengali

COMMITTEES

- **Society for Artificial Intelligence and Deep Learning** [Website](#)
A non-profit, professional group of motivated individuals based out of BITS Pilani, working on research and application of Artificial Intelligence and Deep Learning.
- **Electronics and Robotics Club** [Website](#)
The Electronics and Robotics Club (ERC) of BITS Goa is a diverse group of students with interests ranging from electronics to machine learning to mechanical design.