

Rishav MUKHERJI

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EDUCATION

BITS-Pilani, K.K. Birla Goa Campus

2020 - 2024(Expected)

B.E. ELECTRONICS & COMMUNICATION

MINOR IN DATA SCIENCE

- 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 that packages implementations of different kinds of **ViTs** and methods to visualize their attention maps, and provides an **easy-to-use API**.
- **RoDeO** 2021
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
- **Reddit Tagging** **GitHub** 2022-Ongoing
GROUP PROJECT
Building a complete text classification model using Python and Pytorch and deploying it as a web-app to take data from Reddit and classifying its flair tag using Transformers.

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 - Jan 2022
INSTRUCTOR, CENTER FOR TECHNICAL EDUCATION, BITS GOA [WEBSITE](#)
- **Natural Language Processing** March 2022 - Ongoing
MENTOR, CENTER FOR TECHNICAL EDUCATION, BITS GOA [WEBSITE](#)

SKILLS

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

COMMITTEES

- **Society for Artificial Intelligence and Deep Learning** [Member] [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.
- **Language Research Group** [Core Member] [Website](#)
Language Research Group (LRG) is a student-run Special Interest Group at BITS Pilani, Goa Campus. The group aims to study the theoretical and practical underpinnings of all things related to language, with a strong focus on inculcating the tools of research and experimentation in its methodologies to discover what lies underneath language.
- **Electronics and Robotics Club** [Member] [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.
- **SEDS Celestia** [Core Member]
SEDS Celestia is the Astronomy and Astrophysics club of BITS Pilani, K. K. Birla Goa Campus under the parent organization of SEDS India (which in turn is a chapter of the international SEDS organization)
- **IEEE BITS Pilani Goa Student Branch** [Core Member]
The IEEE student branch is a local chapter of the international IEEE organisation which functions with the aim to promote studies in various technological fields.