

# Rishav MUKHERJI

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## EDUCATION

### BITS-Pilani, K.K. Birla Goa Campus

B.E. ELECTRONICS & COMMUNICATION

• Current CGPA - **9.424**

2020 - 2024(Expected)

## 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**
- **Program Synthesis using Julia** 2021-Ongoing  
CLUB PROJECT, SAIDL  
Developing implementations of **program synthesis** techniques in **Julia** focusing on systems which synthesise programs for a transformation from a specified grammar given input / output examples of the transformation

## COURSE WORK

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

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<b>PROGRAMMING LANGUAGES</b>	<b>Experienced:</b> Python   C++   C <b>Familiar:</b> Julia   Java
<b>FRAMEWORKS</b>	PyTorch   Keras   Scikit-learn   Tensorflow
<b>LIBRARIES</b>	Numpy   Pandas   OpenCV   Matplotlib
<b>TOOLS</b>	GIT
<b>LANGUAGES</b>	English   Hindi   Bengali

## COMMITTEES

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- **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.