

# Rishav MUKHERJI

Mumbai/India

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GitHub



LinkedIn



Website

## EDUCATION

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

2020 - Ongoing

B.E. ELECTRONICS & COMMUNICATION

MINOR IN DATA SCIENCE

- Current CGPA - **9.24**
- Top 2% in the institute
- Recipient of 4 consecutive BITS Goa Merit Scholarships

## EXPERIENCE

- **CLNet Lab, BITS Goa** Website 2022 - Ongoing  
UNDERGRAD STUDENT RESEARCHER  
Developing a model for carrying out **Code Search**, **Syntax Error Detection** and **Code Repair** on **C** programming language  
Supervised by **Dr. Swati Agarwal**
- **CSIR - CEERI, Chennai** 2022  
RESEARCH INTERN  
Working on **Image and Video Enhancement and Scaling** for Remote Photoplethysmography (**r-PPG**) for more accurate long distance inferences  
Supervised by **Dr. Madan Kumar Lakshmanan**
- **Wingify** 2022 - Ongoing  
MACHINE LEARNING INTERN  
Working on **Image to Image Translation** using **Generative Adversarial Networks** for health and lifestyle applications  
Supervised by **Paras Chopra**

## 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**.
- **Exploring Deep Learning models for Visual Saliency Prediction** 2022 - Ongoing  
CLUB PROJECT, SAIDL  
Implementing and bench-marking DeepGaze models. Exploring where these models fail and propose possible solutions.
- **Developing ML-DL models for IoT-based applications** 2022  
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

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- 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

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- **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

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- 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

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- **Society for Artificial Intelligence and Deep Learning [Core 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.