# SAGNNIK BISWAS

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 **⑤** Sagnnik Biswas

#### **EDUCATION**

## Manipal Institute of Technology

BTech - Electronics and Communication - CGPA - 8.06 (present)

October 2020 – June 2024

Manipal, Karnataka, India

#### Research Interest

Computer Vision, Robotics, Adversarial Networks

Developing Robotics Perception, Adversarial Networks and Unsupervised learning techniques piques my interest

#### Technical Skills

• Deep Learning

• Robotics

• Representation

• Contrastive Learning

• Computer Vision

• CNNs

Learning

• GANS

#### **PROJECTS**

# Understanding Autoencoders ☑ | Tensorflow

March 2022

- Representational Learning using ANN and CNN layers.
- Reducing noise in Data.

# ANN from scratch 🗷 | Python - NumPy

April 2022

- Creating personal ANN library.
- Hand-Coded Backprop and Loss Function.

# Rock Paper Scissors 🗷 | Tensorflow Object Detection - OpenCV

June 2022

- Includes both trained CNN and Pretrained Object Detection Model.
- User can play Rock-Paper-Scissors with the computer real time.

## **DCGAN** ☑ | Pytorch

July 2022

- Implementation of DCGAN paper.
- Generating fake images of celebrities.

## <u>Pix2Pix</u> ☑ | Pytorch

August 2022

- Implementation of Pix2Pix paper.
- Implementing on MAP dataset to mask various unnecessary elements in the map view.

## Experience

## RoboManipal Electronics Subsystem Member

December 2020 – Present

MIT, Manipal

- Developing and Designing Circuits, CADs.
- Automation of Robots.
- Selected for Nationals in ABU Robocon, 2022.
- First place in Circuit Fixer, an event organized by COEP, Pune.

## TECHNICAL SKILLS

**Languages:** Python, Java, C, C++

Developer Tools / Frameworks: Tensorflow, Pytorch, NumPy, Matplotlib, OpenCV, Pandas, Scikit-Learn,

Arduino, EagleCAD, MatLab

Additional Skills: PCB designing, Assembly Language Coding, Verilog

## **EXTRACURRICULAR**

## OpenCV workshop

December 2021

<u>Co-Presenter</u>

MIT, Manipal

• Working out live demos.

#### **CERTIFICATIONS**

- Machine Learning Specialization Coursera
- GANS Specialization Coursera

• Deep Learning Specialization - Coursera