SAGNNIK BISWAS

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EDUCATION

Manipal Institute of Technology **October 2020 – June 2024**
BTech - Electronics and Communication - **CGPA - 8.00** *(present)* *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
- Learning
- Reasoning
- Computer Vision
- Representation
- Counterfactual
- 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.

Pix2Pix ☑ | Pytorch **August 2022**
- Implementation of Pix2Pix paper.
- Implementing on MAP dataset to mask various unnecessary elements in the map view.

Experience

RoboManipal **December 2020 – Present**
Electronics Subsystem Member *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**.

Research Internship
IIT Kharagpur *December 2022 – Present*
- Counterfactual Reasoning in Language and Vision datasets and Image Difference Captioning
- Under the guidance of Asst. Prof. Somak Aditya

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**
Co-Presenter *MIT, Manipal*
- Working out live demos.

CERTIFICATIONS

- Machine Learning Specialization - Coursera
- Deep Learning Specialization - Coursera
- GANS Specialization - Coursera