SAGNIK SINGHA ROY

Uttarpara, West Bengal
singharoysagnik007@gmail.com
(+91) 9874711982

Education

Bachelor's in Information Technology
Heritage Institute of Technology - Kolkata, West Bengal
August 2015 to June 2019

Higher Secondary(12th Pass)
Mahesh, West Bengal
June 2012 to March 2014

Skills / IT Skills

- Python / Javascript / Php / Dart
- Machine Learning algorithms / Deep Learning / Reinforcement Learning
- Tensorflow / scikit-learn / openCV / GluonCV
- React.js / Express.js / Laravel
- SQL database / MongoDB / FireBase
- Flutter for android application development
- Tableau

Certifications and Licenses

AWS Computer Vision: Getting Started with GluonCV
April 2020 to Present

Learned artificial neural networks and other deep learning concepts, and how to combine neural network building blocks into complete computer vision models and train them efficiently using the Apache MXNet and GluonCV toolkit.

Projects / Papers Presented

Home Automation using IOT
Control home appliances using mobile application connected to a server using NodeMCU, Arduino modules.

Automation of mini dam gate

The idea is to control a mini dam gate using mobile application based on weather forecast and water level monitoring and then automate opening-closing based on rainfall using predictive analysis from last 20 years rainfall dataset.

Deep reinforcement algorithms to play atari games

Trained neural networks using reinforcement algorithms to play atari games. Games are provided by python gym package.

Computer vision projects

• Trained convolutional neural networks and used pretrained networks (ResNet, inception networks) for object detection, image classification, image segmentation.
• Style transfer of images using attention aware neural networks.
• Image captioning using attention aware neural networks and LSTM.
• Image generation using generative adversarial networks.
• Handwritten text recognition using connectionist temporal classification.

Speech to text

• The aim is to convert audio signal into text.
• Trained a neural network after extracting feature from audio signal to minimize connectionist temporal classification loss.

Song classification

• The aim is to classify songs based on given genres.
• Trained a neural network after extracting features from audio signals to minimize categorical-crossentropy loss.
• Plotted embeddings for further analysis and predicted genre of new songs.

Web application

Developed e-commerce web application using php, javascript.