Somdev Basu

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Education

Netaji Subhash Engineering College,
Bachelor of Technology in Computer Science & Engineering, MAKAUT, Kolkata
2022, Aggregate CGPA: 8.6/10.0

The Aryans School, Kolkata
School Board Examinations
ISC - 2018 Percentage: 80.50%
ICSE - 2016 Percentage 91.33%

Experience

Project Intern Feb '22 - Apr '22
Tata Research & Innovation Labs Pune, India
Built a Markov based model to generate a structured approach to Interaction Systems. Utilized extensive research to develop models and study metrics.

Software Engineer Intern Jul '21 - Sep'21
Telaverge Communications Bangalore, India
Worked on OCR based models on pyTesseract and Amazon Textract. Worked on scalable and elastic ML pipelines on OCR readability, classification and Object Detection

Computer Vision Research Jun - Sep '20
Tessellate Imaging Pune, India
Worked on Document Layouting and OCR classification. Worked with MonkAI open-source library(model optimization, training, application oriented approaches)

Machine Learning Engineer Feb - Apr '20
TeamCognito Kolkata, India
Work was centred around using several Mask R-CNN models for Object detection and Image segmentation for Vehicular Damage Detection.

Technical Skills

Programming Languages	C, C++, Python, JAVA, HTML, CSS, VanillaJS
Softwares and Libraries	Numpy, ScikitLearn, Matplotlib, Pandas for Machine Learning, OpenCV, Keras, Tensorflow, Flask
Courses	Data Structures and Algorithms, DBMS, OOP, AI, SQL.
Certificates	Certificates and LoRs
Positions of Responsibility	President of GNX, The Open Source society of NSEC

Personal Projects

Flight Price Prediction System Flask backed end-to-end ML project

- Analysed and utilised Random Forest Regressor based model to predict Flight Prices based on historical data.
- Boosted accuracy from **82.76% to 89.48%**.
- Used: Numpy, Pandas, OpenCV, Seaborn, Matplotlib, Flask, Git LFS, Heroku.

Smart Home Automation Device

- Wifi based **ESP8266** module on **NodeMCU**-incorporated Blynk app, for controlling home appliances through mobile devices.
- Used: Arduino IDE, Flask, Heroku, IFTTT, Google Actions, Blynk

Dog Breed Web-Classifier

- Trained an ImageNet Classifier. Used a MobileNetV2 model with a few customised layers. The multi-class categorical cross entropy loss was optimised.
- Got **91.2% testing accuracy**.
- Used: Numpy, Pandas, Matplotlib, Transfer Learning, Neural Networks, Flask, AWS EC2

Achievements

NASA SpaceApps Challenge '19 #3rd, National Regionals
Smart India Hackathon '20 - #1st in Regional Level (Statement by Amazon)
Hult Prize: Qualified for APac Finals
Publication & Certifications: *Smart Entry/Exit Based on Detection of Face-mask and Body Temperature for COVID-19 (IEEE publication in progress)*, Joy of Computing using Python(NPTEL), Applied Machine Learning in Python by University of Michigan(Coursera).

Soft Skills

Leadership, Public Speaking, Event Management, Technical Writing.

Hobbies

Photography, Blogging, Debating, Salsa, Guitar.

Languages

English, Hindi, Bengali