

Samyak S Sarnayak

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Summary

An interested programmer looking to help in the development of projects so that I can further develop my skills and interests in AI, ML, Web development and computers in general.

Education

PES University

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING

- Currently in Fourth Semester.
- CGPA: 9.83.

Bengaluru, India

2018 - 2022

Sri Kumaran Children's Home PU College

PRE-UNIVERSITY COLLEGE

- Board: Department of Pre-University Education. Percentage in 2nd year PUC: 95.16%.

Bengaluru, India

2016 - 2018

VLS International School

CLASS 9 AND 10

- Board: Council for Indian Secondary Certificate Examinations (CISCE). Percentage in Class 10: 92.66%.

Bengaluru, India

2014 - 2016

Whitefield Global School

CLASS 6 TO 8

- Board: Central Board of Secondary Education (CBSE).

Bengaluru, India

2011 - 2014

Bal Bhavan

UPTO CLASS 4

- Board: Karnataka State Board.

Binaga, Karwar

2006 - 2010

Skills

Programming	Python, C, JavaScript, Julia (basics), Java (basics)
Deep Learning	Artificial Neural Networks, CNN, RNN, Deploying models
Data Science	Collecting, Cleaning, Visualisation, Basic Machine Learning
Blockchain	Solidity, Web3.js, Truffle, Web3.py
SysAdmin	Linux, Configuring and Integrating different servers
Back-end	Flask, REST APIs, Heroku, PHP
Front-end	HTML5, CSS, JavaScript, JQuery, Bootstrap, AJAX

Projects

CapStyle

STYLIZED IMAGE CAPTIONING USING DEEP LEARNING MODELS

- Created a custom dataset named CapStyle5k derived from Flickr8k.
- Implemented a sequence-to-sequence encoder decoder model with attention.
- Tools used: Python, Keras, Tensorflow GPU, CUDA, Flickr8K dataset.

CDSAML

Jun. 2019 - Till date

BlockChat

A BLOCKCHAIN BASED MESSAGING APPLICATION

- Implemented a Python-based blockchain API with encryption.
- Built a complete web application with HTML, CSS and JavaScript on the front-end and PHP on the backend
- Web App link: <https://blockchat-webwarriors.000webhostapp.com/>.
- Tools used: Python3, Flask, Heroku, Cryptography python module, Firebase, HTML, CSS, Bootstrap, JavaScript, JQuery, AJAX, PHP, 000webhost.

PES University

Sep. 2019 - Nov. 2019

Time Series Analysis of Amazon.in data

A DATA SCIENCE PROJECT ABOUT COLLECTING AND ANALYSING AMAZON DATA

- Created a custom web scraper to collect data on a few products periodically. Tools used: Python, Scrapy, PostgreSQL, Heroku.
- Performed data preprocessing - cleaning, normalisation, standardisation and generated several visualisations.
- Performed a few hypothesis tests and checked for correlation using different plots and linear regression.

PES University

Sep. 2019 - Nov. 2019

ABNORMALITY DETECTION FROM DIAGNOSTIC IMAGES USING DEEP LEARNING

Oct. 2019

- Classification and Detection of Abnormalities in lung and bone X-Ray images.
- The model also accepted numerical and categorical inputs such as patient age and gender.

Complete Server Setup

PES University

INTEGRATING VARIOUS COMPONENTS OF A WEB SERVER

Oct. 2019

- A basic Web Application made by integrating a web server (Apache), an application server (Django), a database server (MySQL), a loadbalancer (HAProxy) and a firewall (ufw).
- Different servers were configured and integrated to create a multi-server architecture.

Recipe Viewer

DSC PESU

A WEB APP TO AID IN COOKING

Jun. 2019 - Till date

- A Heroku web app which extracts text from images of printed recipes or screenshots of a recipe.
- NLP is performed on the text and images, videos, GIFs are displayed based on the ingredients and steps.
- Link to web app: <http://dsc-flask-api-heroku.herokuapp.com/>

Sentiment Analysis of Tweets

PES University

IN C

Jan. 2019 - Apr. 2019

- A (pure) C program that gets random tweets from the Twitter API and performs basic sentiment analysis on it using a dataset of words and associated sentiment.
- Tools used: C programming language, libcurl, libssl, Twitter API, SentiWords dataset.

Web Browser History Analyser

PES University

A PYTHON PROGRAM TO EXTRACT AND ANALYSE BROWSER HISTORY

Sep. 2018 - Nov. 2018

- A python program that extracts the browser history of the user. It then categorizes the websites and displays statistics using graphs.
- Finally it tries to predict the gender of the user (prototype - uses a very small dataset).
- Tools used: python, pandas, matplotlib, sklearn

Experience

Deeplogick

Bengaluru, India

INTERNSHIP

Dec. 2019 - Till date

- Trained and deployed object detection models based on SSD MobileNet V2.
- Optimised models to run on GPUs and Jetson Nano using TensorRT.

Center for Data Science and Applied Machine Learning

PES University

PROJECT INTERNSHIP

Jun. 2019 - Aug. 2019

- Built CapStyle - a deep learning model to generate stylized image captions.
- Generated a dataset of images and stylized captions for those images, based on the Flickr8k dataset.
- Tested various different combinations of layers and models using many automated image caption evaluation metrics including BLEU, ROUGE, METEOR, SPICE, CIDEr.
- A paper based on this project will be published.

Extracurricular Activity

PES Open Source

PES University

CORE MEMBER

Sep. 2019 - Till date

- Part of the core tech team. Website: <https://pesos.github.io/>.
- Helped organise Hacktoberfest 2019 events at PES University.

AI Challenge at Phase Shift 2019

BMSCSE, Bengaluru

2ND PLACE WINNER

Oct. 2019

- Built an object detection and classification model for recognising and classifying waste products in a given image.

Honors & Awards

2019 **12th Rank in 2nd semester CSE**, CNR Rao merit scholarship with a SGPA of 9.83

PES University

2018 **12th Rank in 1st semester CSE**, CNR Rao merit scholarship with a SGPA of 9.83

PES University

2017 **State Rank 92**, National Level Science Talent Search Examination (NSTSE)

Bengaluru, India

2012 **International Rank 73**, 15th National Science Olympiad

India