

SIDDHANT SHAMBHARKAR

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Education

IIT Kharagpur

Master of Technology in Computer Science

Aug. 2022 – May 2024

CGPA:8.02

MIT College of Engineering, Pune

Bachelor of Engineering in Information Technology

Aug. 2017 – May 2020

CGPA:6.99

Government Institute of Polytechnic, Aurangabad

Diploma in Information Technology

Aug. 2014 – May 2017

CGPA:7.8

Relevant Coursework

- Algorithm Analysis
- Data Structures
- Computer Networks
- OOP's
- Operating System
- DBMS
- Computer Vision
- Image Processing

Projects

Network Architecture Search(NAS) for Neural Network using Meta Heuristic Algorithms January 2021

- Addressed the need of automated NAS by utilizing population based meta-heuristic algorithms for optimization
- Constructed a specialized algorithm for architecture search, employing population creation, crossover, and mutation
- Utilized multiprocessing for parallelization, leading solution generation acceleration, better exploration and 20% reduction in search time
- With a noticeable 80% accuracy through the strategic use of algorithmic optimization yielding effective neural network architecture

Chat Application with Abusive Text Detection

February 2023

- Engineered a CLI-based chat app using socket programming featuring real-time abusive text detection in text messages
- Utilized non-blocking call for concurrency, offering features like private messaging, group chat, broadcast functionality
- Fine-tuned a pre-trained multilingual BERT model (mBERT) using a vast labeled dataset in Hindi language
- Resulted in a robust chat platform with live interaction and group management with abusive text detection having 85% accuracy

Predictive StockTrader: AI-Driven Market Investment Platform

April 2023

- Designed and build a stock investment web application which automates the investment process to maximize the returns
- Utilized Long Short-Term(LSTM) based RNN model which is trained on 20 years of data for reliable price prediction
- Employed Flask framework for web development and PostgreSQL for dyanamic and secure database for transactions
- Successfully implemented a dynamic stock investment algorithm with daily fine-tuning to keep model updated

Fake Face Detection using Haar feature Extractor

February 2023

- Developed Python script to pre-process images, variance thresholding, and feature extraction
- Haar feature extraction is used for simple computation, adaptability to different object sizes and robustness changes
- Trained AdaBoost and Random forest network model over 1k+ real and fake face images and compared the results
- Established automated image classification system, achieving consistent accuracy between 85 to 87% for classification

Technical Skills

Languages/Libraries: C, C++(STL), Python(Numpy, Pandas, PyTorch, OpenCV), SQL

Developer Tools: Git, Latex, VS Code, Google Colab

Technologies/Frameworks: Flask, FastAPI, Multithreading, Socket Programming, Cyber Security

Leadership / Extracurricular

Competition: Earned victory in the Capture the Flag(CTF) Challenge organized by CloudSEK company

Leadership: Organized "Innovating Technologies" Inter-College paper presentation competition with 35 participants

Leadership: Students Coordinator at MMM Hall, IIT Kharagpur where I organized different technical workshop and events

Extra Curricular: Secured the first prize among the 47 participants in the Solo Dance competition at "Gracia-2018", a cultural fest in MIT College, Pune

Hobbies: Dancing, Trekking, Reading, Swimming