HARSHIT SONI

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EDUCATION

Binghamton University, State University of New York   **Aug 2022 – May 2024**
Master of Science in Computer Science with Artificial Intelligence track
Relevant Courses: *Data Structures and Algorithms, Machine Learning, Artificial Intelligence, Programming Language, Design Patterns*

University of Mumbai
Bachelor of Technology in Electronics and Telecommunication Engineering   **Aug 2018 – May 2022**

TECHNICAL SKILLS

Programming Languages: Python, C, C++, Java, JavaScript, SQL, MySQL
Tools: Flask, Selenium, Pandas, NumPy, GIT, MATLAB, Arduino, Scikit-learn, TensorFlow, Keras, Statistical Modeling, Cuda, Shell
Skills: Automation, AWS services (S3, EC2, IAM), Google Cloud (GCP), Data Analysis & Mining, Machine Learning, Math (Linear Algebra, Calculus, and Probability and Statistics), Quantitative Analysis, NLP, Image Processing, RDMS

PROFESSIONAL EXPERIENCE

TRUST SCOUT   **June 2023 – Aug 2023**
Software Engineering Intern   *New York City, New York*
- Engineered an automated email system and AI-driven prompter, reducing manual email efforts by 80% and elevating client interaction by 40%
- Led data analysis on 30M real estate transactions and 1.6M agents, delivering insights that directly improved decision making and enhanced client relations, through statistical modeling and machine learning models
- Collaborated with the Founder/CEO to enhance database and marketing strategies, resulting in a 25% increase in client satisfaction and a 33.3% growth of the sales team. Technologies utilized: Python, AWS, Django, PostgreSQL, and OpenAI

ROBOTICSFORSURE   **June 2021 – Aug 2021**
Software Engineering Intern
- Implemented Robotics Process Automation (RPA) in machine learning projects to increase operational efficiency
- Successfully automated tasks, such as data analysis and math calculations, resulting in a significant time reduction of 30% for clients
- Designed, developed, and deployed a live machine-learning solution for automating data extraction processes

FIVERR   **Mar 2021 – Aug 2021**
Freelancer
- Developed various data mining and automation algorithms for over 7 international clients, improving efficiency by 20%
- Constructed a comprehensive database of Twitter data and news articles for the South African election for the client's research paper
- Designed, and deployed a Twitter Bot which auto-replies to tweets and retweets when tagged, enhancing social media engagement

AUSTEN C&C   **June 2019 - July 2019**
Digital Marketing Intern
- Collaborated with the client servicing team managing diverse client requirements, and enhancing my skills in client relationship
- Developed creatives such as web pages tailored for branding and marketing purposes, increasing client engagement
- Implemented SEO strategies on client websites, resulting in an increase of 20% in user engagement

RESEARCH EXPERIENCE

Binghamton University   **Jan 2024 – Present**
Research Assistant with Professor Yincheng Jln   *Binghamton, New York*
- Specializing in Human Computer Interaction (HCI) research to enhance real-time ASL recognition by application of ML models, image processing, and NLP
- Actively advancing models through Neural networks, and computer vision to tackle research challenges of hand recognition

Binghamton University   **Jan 2023 – May 2023**
Research Assistant with Professor Adnan Rakin   *Binghamton, New York*
- Researched the feasibility of Machine Learning (Pytorch, CUDA) autoencoder models for optimizing microscopic filter design in semiconductors
- Formulated an exploratory algorithm using Neural Networks to fabricate semiconductors

PROJECTS

Stock Market Prediction Using Neural Networks and Social Media Analysis   **April 2022 – May 2022**
Team Project
- Developed a neural network model to forecast stock market trends using historical data, improving prediction accuracy upto 85%
- Leveraged natural language processing techniques to analyze and interpret data from social media and news articles
- Applied machine learning techniques to train the model, and conducted comprehensive backtesting to validate the model's performance

Wear Your Weather   **Oct 2020 – Jan 2021**
Independent Project
- Developed a web app that provides real-time weather updates and gives outfit recommendations based on the day's weather, enhancing user experience and daily decision-making
- Utilized a tech stack including Python, Flask, SQL Database, HTML, CSS, and JavaScript

Twitter Scraper   **July 2020 – Aug 2020**
Independent Project
- Developed a Python script capable of scraping tweets and related details without the necessity of a Twitter developer account
- Utilized libraries such as BeautifulSoup and Selenium to scrape them and visualized the data using matplotlib and pandas

Fake News Detection   **June 2020 – July 2020**
Team Project
- Built an ML-based model that detects and labels the questioned news as "fake" or "real" & then provides validated news articles
- Integrated the detector with a Twitter bot which replies to a tweet when tagged, identifying the headline as REAL or FAKE

Python and Arduino Integration   **May 2020 – July 2020**
Independent Project
- Integrated the Arduino systems with Python lang using the Pyfirmata Library, made explicitly designed to incorporate them
- Developed program will always run when attached to the system without taking up any space on the Arduino
- Some of the projects include Digital Dice, Tkinter control LED, Accelerometer (tilt-sensor), Rotary encoder (angle-sensor)

CERTIFICATIONS

Construct Stock Market Indices from Coursera   **Dec 2022**
Profit Analysis using Economic Value Added from Coursera   **Dec 2022**
JPMorgan Software Engineering Virtual Internship Experience on Forage   **Sept 2022**
• Used Perspective data visualization software and Python to monitor stock price trends and create trading strategies
Git for Developers from Coursera   **Oct 2020**
Mathematics (Linear Algebra, Multivariate Calculus, and PCA) for Machine Learning from Imperial College London:
                                                                                              July 2020

LEADERSHIPS & HONORS

SUNY BINGHAMTON   **Jan 2023 – May 2023**
Graduate Grader for Machine Learning course   *Binghamton, New York*
- Leveraged my expertise in Machine Learning to grade 5 exams and 6 projects for a class of 50 students

IEEE Xplore Research Paper   **Sept 2021**
- Led a team of 4 for the Research & Development of the paper "Fake News Detection Using Natural Language Processing and Logistic Regression"
- Received a certificate for excellent team presentation

Hackathon   **July 2020**
- **Placed 2nd out of the 49 teams**
- Led a team of 3 to develop a '**Fake News Detection Model using Machine Learning and Natural Language Processing'**
- Built an ML model to classify news as "fake" or "real," providing users with verified news, enhancing digital media's reliability
- Integrated the model with a Twitter bot that replies to a tweet when tagged, a stand out feature that elevated the project