SWAPAN KUMAR SARKAR

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PROFILE SUMMARY

Results-driven and detail-oriented Machine Learning Engineer & Python Developer with a strong foundation in mathematics & Python language and expertise in machine learning, python programming, deep learning, and computer vision passionate about solving real-world problems using AI and building scalable solutions. Experienced in developing machine learning models, some python projects and algorithms for image processing, object detection, and classification. Dedicated to continuous learning and leveraging technology to drive impactful outcomes.

HIGHLIGHTS

- **Programming Languages:** Python, Django(framework)
- **Python Skills:** Works on Arithmetic, Relational & Logical operators, String, Data Structure Algorithms(Tuple, List, Dictionaries, Set), works on if statement, while loop & for loop, Attributes & Methods, create class with constructor, Inheritance, Multiple Inheritance, Multi level Inheritance, works with libraries Numpy, Pandas & Matplotlib
- **Machine Learning Frameworks:** TensorFlow, Keras
- **Machine learning Skills:** Missing value handling, Encoding, Outlier handling, Feature scaling, Feature selection technic, Feature extraction(PCA), Regularization, Confusion matrix, Cross validation, Bagging technic
- **Machine learning models:** Multiple linear regression, Polynomial regression, Logistic regression, Naïve bayes, Decision trees, SVM, KNN, Random forests, k-means clustering, Hierarchical clustering, DBSCAN clustering, Apriori algorithm, FP growth algorithm
- **Deep learning models:** ANN,CNN,RNN
- **AI Techniques:** Machine Learning, Deep Learning, Computer Vision
- **Tools and Libraries:** NumPy, Pandas, Matplotlib, Scikit-learn, OpenCV
- **Computer Vision Libraries:** OpenCV
- **Image and Video Processing:** Segmentation, detection, classification, tracking
- **Preprocessing Techniques:** Augmentation, normalization, histogram equalization, noise reduction, feature extraction, contour extraction
- **Front-end Skills:** HTML, CSS, JavaScript
- **Back-end Skills:** Python, Django(framework)
- **Database Skills:** MySQL
- **Git & GitHub :** working knowledge of version control system on (e.g.,Git) .

ACCOMPLISHMENTS

- **Predictive analytics:** Developed predictive analytics models for loan approval processes, utilizing supervised machine learning techniques to optimize decision-making and risk assessment
- **House Price Prediction:** Developed analytics model on house price datasets, utilizing machine learning techniques to predict house price
- **Image Classification:** Developed a CNN model for cat and dog image classification using advanced augmentation techniques
- **Object Detection & tracking:** Built solutions for pedestrian detection, smile detection, and vehicle tracking from video streams

WORK EXPERIENCE

- **ML & Python Developer**, working as Associate Software Developer with an organization being partner and plays a most responsible roles for developing Software and success the projects. (June 2024 – Present)

My Achievements list during this time period.

AI/ML Projects:
1. Loan prediction model create by using ml algorithms.
2. House prediction model create by using ml algorithms.
3. Customer churn analysis
4. Object detect, tracking & counting. Please go my profile to view-
   https://swapancodes.github.io/website/

Python Projects:
1. E-commerce app create by using python and django framework with mysql database
   and deployment it on pythonanywhere. Please go online Link-
   https://s3w1a0p5a7n.pythonanywhere.com
2. Pharmacy Management System Software creation. Please go my profile to view-
   https://swapancodes.github.io/website/

- **Internship (Data Science)**, Alfido Tech (Dec'24-Mar'25 Remote)
  Project 1: Analyze a Zomato Datasets and create Visualization.
  Project 2: Loan Aproval prediction case study.

- **Network Engineer**, Nipun Net Solution Pvt Ltd (June 2023 – June 2024, Kolkata)
  Roles & Responsibilities: handling network project .

- **Network Support Engineer**, Informatics Technologies Pvt Ltd (August 2022 – November 2022, Gujarat)
  Roles & Responsibilities: office network infrastructure support.

- **Various Engineering Roles(Software Eng. ,System Eng.),** IMSI Staffing, Precision TechServe , Aidni Infotech
  (2019 – 2022, WB)
  Roles & Responsibilities: web development back-end and front-end software support. Discuss with clients to
  understand requirement.

- **Private Tutor (Mathematics)**, Self-Employed (2014 – 2019, WB)

QUALIFICATION

- **B.Sc. in Mathematics, University of Calcutta, 2014**
- **Higher Secondary (Science), W.B.C.H.S.E, 2011**

TECHNICAL QUALIFICATION

- **Post Graduate Diploma in Software Engineering, from THE INSTITUTE OF COMPUTER ENGINEERS
  [INDIA]**

SOFTSKILLS

- Problem-Solving
- Communication
- Collaboration
- Time Management
- Critical Thinking
- Adaptability

PERSONAL DETAILS

- Date of Birth: February 3, 1992
- Languages Known: Bengali, English, Hindi
- Nationality: Indian
- Marital Status: Unmarried