Nischal Chandur

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Links https://www.linkedin.com/in/nischal-chandur https://github.com/chandurnischal

Technical Skills

Operating Systems: UNIX | Windows
Programming Languages: Python | Golang | C/C++ | HTML/CSS | JavaScript | MATLAB
Database Management Systems: PostgreSQL | MySQL | MongoDB
Data Science and Machine Learning: Numpy | scikit-learn | Pandas | SpaCy | Pytesseract | OpenCV | Matplotlib | Seaborn
Other: Amazon Web Services (AWS) | Docker | Git | Microsoft Office Suite

Work Experience

Latlong (ONZE Technologies Pvt. Ltd.) **September 2022 - June 2023**
Bangalore, India
Data Engineer

- Designed and implemented Python-based data extraction tools, instrumental for conducting location-based data analyses.
- Conducted analyses of client data together with geo-spatial attributes to uncover areas with untapped profit potential. Employed Python and QGIS for visualizing these regions on a map, shedding light on the factors behind their underutilization. Additionally, conducted an in-depth statistical analysis to estimate the profitability of these unexplored areas for the client.
- Financial institutions used these reports to make informed loan approvals, automobile companies to establish retail outlets and real-estate developers to decide the choice of properties to be constructed in these regions.

Latlong (ONZE Technologies Pvt. Ltd.) **January 2022 - July 2022**
Bangalore, India
Software Engineering Intern

- Engineered OCR APIs utilizing the Tesseract OCR engine to extract and process data from public documents. Established a streamlined pipeline for file extraction, OCR processing, and storage of data into a server database for future access.
- Developed a tailored K-means clustering algorithm to pinpoint areas in India with increased purchasing power through geo-spatial attributes. Conducted an in-depth analysis to comprehend the attributes driving the heightened purchasing power in these regions. Employed Python and QGIS to present these regions to clients, aiding them in reimagining their marketing strategies.

MTRDC, Defence Research and Development Organization **August 2021 - December 2021**
Bangalore, India
Research Intern

- Enhanced RF Window performance by implementing structural modifications to minimize signal loss. Proposed three modifications that were 85%, 60%, and 55% more efficient compared to traditional designs.
- Compiled and published research findings in the Wireless Antenna and Microwave Symposium (WAMS) 2022, organized by the National Institute of Technology, Rourkela, India.

Education

University of Maryland **August 2023 - Present**
College Park, MD, United States of America
Master of Science in Data Science
Relevant Coursework: Probability & Statistics | Fundamentals of Machine Learning | Algorithms of Data Science | Data Representation and Modelling | Computer Vision

PES University **August 2018 - May 2022**
Bangalore, India
Bachelor of Technology in Electronics and Communication Engineering
Specialization in Signal Processing and Systems Engineering (SPaSE)
Relevant Coursework: Engineering Mathematics | Linear Algebra | Random Processes | Artificial Neural Networks | Pattern Classification

Projects

Real-time NBA Data Analytics and Prediction System **August 2023 - December 2023**

- Developed an end-to-end data extraction pipeline for historical NBA data, implementing cleaning and preprocessing steps to enhance data quality.
- Employed logistic regression in a machine learning model to predict match outcomes between any two teams, utilizing the processed historical data for training.
- Designed and implemented an interactive front-end using Flask, HTML, and CSS to showcase match-ups, predictions, and detailed insights about NBA games, teams, and players.

Real-time Detection of Diseases in Tomato Plants using Computer Vision and Convolutional Neural Networks **May 2021 - May 2022**

- Designed and trained a custom Convolutional Neural Network (CNN) using 18000+ tomato plant images for disease detection. Achieved comparable performance to traditional CNNs such as LeNet, AlexNet, and GoogLeNet while employing a more streamlined architecture with fewer convolutional and pooling layers, enhancing computational efficiency.
- Created a user-friendly API for the submission of plant images, providing disease identification and precautionary recommendations. Deployed the model on Sipeed Maxduino hardware, specifically designed for efficient deployment of complex CNNs, ensuring real-time assessment of tomato plant health in field conditions.
- Presented the project's design and outcomes at 2022 First International Conference on Recent Advances in Computer Science, Information Technology, and Electronics Applications.

Detection of Exo-Planets using Machine Learning **August 2020 - December 2020**

- Constructed a supervised machine learning model using Support Vector Machines to predict exoplanets within remote stellar systems, using data obtained from NASA's Kepler Missions, which provided information about the changes in star luminescence over a span of approximately 6 years.
- Explored several standard supervised machine learning algorithms like Logistic Regression, K-means clustering, Support Vector Machines.
- The final model employed Support Vector Machines to predict the existence of exoplanets with upto 98% accuracy.