Gufran Bhatti

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PROFILE

An auto-didact, with passion in Computer Science, enthusiastic about joining an organization to learn and give my best.

EDUCATION

- KIET - **Bachelor of Science in Computer Science** (2019 - 2023) **CGPA 3.50**
- Government Degree College Gulshan – **Intermediate Pre-Engineering** (2016-2018) **GRADE: C**
- Al-Badr School – **Matriculation Science** (2014-2016) **GRADE: A**

EXPERIENCE

PYTHON DEVELOPER – PRECISION BIRD (PVT) LIMITED (Sep 2023 – Present)

- Automate tasks like downloading and processing spatial data using python to speed up the productivity.
- Use prebuilt object detection models and tune them to detect plants in crop images.
- Use GIS tools to like ArcGIS Pro, Google Earth Pro, etc. to analyze and process sentinel-2 data.

DATA-SCIENTIST – THE SPARKS FOUNDATION (Oct 2022 – Nov 2022)

- Primary task was to perform exploratory data analysis on various datasets.
- Used basic machine learning models on supervised datasets.

TEACHER – SIR SYED COACHING CENTER (2019-2020)

- Taught Mathematics to Cambridge and Karachi Board Students

PROJECTS

INTRUSION DETECTION USING ML AND DL – FINAL YEAR PROJECT (RESEARCH-BASED)

We used a dataset which had normal and malicious network traffics of size 19GB. By using different ML and DL techniques we achieved up to 99.99% accuracy on test data which is the novelty of our research paper and project.

KAGGLE COMPETITION – HOUSE-PRICES-ADVANCED-REGRESSION-TECHNIQUES (0.13 RMSE)

A dataset was given with features of houses and we needed to predict the prices of houses. I first did data preprocessing including filling null values, applying different encoding techniques, and selecting best features. After data preprocessing, I applied Random Forest Regressor to train my model.

EXPLORATORY DATA ANALYSIS ON SAMPLESUPERSTORE DATASET

It is my internship task at The Sparks Foundation where I have to perform Exploratory Data Analysis (EDA) on SampleSuperStore dataset. My task was to find out the weak areas where you can work to make more profits and what all problems you can derive from exploring the data. So, using tableau, I

created some worksheets (profit ratio by geography, key performance indicator, profit ratio by city, sales by category) and add them to create a dashboard. The dashboard visually represents where profits are in negative where work is needed to be done.

Publications

Efficient & Sustainable Intrusion Detection System Using Machine Learning & Deep Learning for IoT

Efficient & Sustainable Intrusion Detection System Using Machine Learning & Deep Learning for IoT | IEEE Conference Publication | IEEE Xplore

Abstract: Everything is evolving toward IoT (Internet of Things) and online-based in our technological environment. The number of IoT devices and ubiquitous computing systems are growing exponentially. This also increases the risk of network breach. To cater this issue many researchers proposed different techniques and get great results but it can be better since everything in online and it's a matter of security and privacy. This paper presents an efficient and sustainable intrusion detection system by the concatenation of two well-known state of the art “kitsune” datasets (ARP MITM and SSDP Flood). Random Forest, decision tree, and Bi-LSTM (Bi-Directional Long Short Term Memory) were implemented in different training and testing ratios and different numbers of layers. Performance measures show that all the models achieved over 99% accuracy but random forest outperforms both models on the concatenated dataset. Both attacks are determined by the given model hence increasing the performance and the system will notify in case of any malicious activity.

Certifications

AI Programming with Python (Nano-Degree)

Udacity Certificate Confirmation

Databases and SQL for Data Science with Python

https://www.coursera.org/account/accomplishments/certificate/PTWDHW22D5D5

Neural Networks and Deep Learning

https://www.coursera.org/account/accomplishments/certificate/4JLE5Y3S7JKV

Machine Learning With Python

https://freecodecamp.org/certification/GufranBhatti/machine-learning-with-python-v7

Data Analysis With Python

https://freecodecamp.org/certification/GufranBhatti/data-analysis-with-python-v7

Skills

Automation, Spatial Data Analysis, Sentinel-2 Data Processing, GIS tools, Relational Database Management System (RDBMS), Jupyter notebooks, Machine Learning, Deep Learning, Feature Engineering, Data Visualization, EDA (Exploratory Data Analysis), Python, SQL (for data science), Neural Networks