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Satyanarayana Madaraboina

Data science,Machine Learning Engineer

SUMMARY

Data Science enthusiast with 4 years of experiences having 3+ years experience in delivering bug-free software as a quality assurance engineer and 1+ years of industry, academic proficiency in creating, developing, testing, and deploying data regression, classification models, using predictive data modeling, data processing, and analyzing data mining algorithms to deliver insights and implement action-oriented solutions to complex business problems as a data scientist.

KEY SKILLS

• Data Analysis • Machine learning Techniques • Deep learning framework • Statistical Methods • Natural Language Processing • Exploratory Data Analysis • Data Visualization • Quality Assurance • Leadership & Training • Data Insights • SQL query

TECHNICAL SKILLS

Tools/Languages: Python, C#,VScode,VB scripting,Jupyter Notebook
Cloud: Microsoft AZURE
Database: MS SQL Server, MySQL,
MS Excel (Advance)

Achievements

- Published articles on GPU installation and its usage
- Participated in KAggle competitions

ADDITIONAL INFORMATION

- Team player | Worked with cross functional teams
- **Languages**: English (Professional working proficiency), Hindi(Full professional proficiency),Telugu(Full professional professional proficiency), Tamil(Elementary proficiency)

EDUCATION

Master of Science in Artificial intelligence & Machine Learning

Jan '21 - Present

Liverpool John Moores University — Liverpool, ENG

- **Research portfolio:**
  - Research on various classification,Prediction models | Literature review and Background analysis on Various classification,prediction models for bug priority prediction | Literature review and Background analysis on Various classification,prediction models for bug fix time prediction
  - Analysis on Multi Target/Label classification | Prediction and evaluation of various Multi target machine learning algorithms for bug priority and bug fix time prediction
  - Presented comparison study of Multi Target classification models for the considered problem statement| Thesis submission

PG Diploma in Machine learning

Nov '19 - Jan '21

IIIT Bangalore — New Delhi, IN

- Secured 4.3/5 CGPA

KEY PROJECTS

Domain: Electronics-consumer | Tech Stack: Python| JAN'20

- Objective: To develop a feature which recognise five different gestures performed by the user that help users control the Smart-TV without using a remote.
- Solution: Convolution 3D and CNN LSTM neural networks are modeled to predict the user control based on the recognised user gesture.
- Key Achievement: Experimented Convolution 3D and Convolution LSTM models with different filter sizes, number of layers,dropout and various parameters.CNN-LSTM outperformed CNN 3D model for gesture recognition with training accuracy of 88% and validation accuracy of 73%.

KEY PROJECTS

Domain: Hospitality| Tech Stack: Python| JAN'20

- Objective: To help users discover restaurants quickly and efficiently and to provide a good restaurant discovery experience
- Solution: Build conversational bot (chatbot) which can help users discover restaurants across several Indian cities
- Key Achievement:Able to develop a chatbot which gives users top 10 restaurants with rating,reviews and the cuisines,cost of cuisines available in tier-1 and tier-2 restaurants based on user inputs.

KEY PROJECTS

Domain: Travel| Tech Stack: Python| JAN'20

- Objective:To build an RL-based algorithm which can help cab drivers maximise their profits by improving their decision-making process on the field.
- Solution: Taking long-term profit as the goal, we proposed Markov Decision Process based on reinforcement learning to optimize taxi driving strategies for profit maximisation
- Key Achievement: created an environment and a RL agent that is trained using **vanilla Deep Q-learning (DQN) which** learns to choose the best request from the pool of requests a cab driver receives.We are able to achieve a good convergence rate for agent with optimal Q-Value.

Competencies

- **Machine Learning Algorithms**: Linear Regression, Logistic Regression, Bagging, Boosting,Clustering
- **Deep Learning Techniques**: CNN, RNN, LSTM, GRU, DNN,GAN
- **Statistical Computing Methods**: A/B Testing, Hypothesis Testing, P-Value method, Critical Value method.
- **Natural Language Processing**: NLU, NER, POS Tagging, - Exploratory Data Analysis: Statistics, ,Data Cleaning, Plotting
- **Exploratory Data Analysis**: Statistics, ,Data Cleaning, Plotting
- **ML/DL packages** : Sklearn, Keras, Tensorflow, Pandas, Scipy, NumPY
- **Deployment** : Flask, Docker, AWS
- **Visualization** : Matplotlib, Seaborn

PROFESSIONAL EXPERIENCE

Software Quality Engineer
Nov '19 - Present

NCR Back Office | NCR Corporation
Hyderabad, IN

NCR Corporation (NYSE: NCR) is a leading software- and services-led enterprise provider in the financial, retail and hospitality industries

Data Analysis & Data visualisations

- Implemented **exploratory data analysis** on NBO BTS data from Jira and Created **insights** for cause and effect of Defects in components of NBO
- Produced **visualisations** and data analysis to senior management and Received appreciation for **uncovering hidden trends**
- Identifying and analyzing the impact of various factors like priority,severity and component in defect resolution time.

Data Processing & Modeling

- Organizing huge data sets effectively via **advanced querying**, **visualization,** and analytics tools.
- Contributed in data cleaning , data preprocessing using **NLP** modules.
- Performed **Feature extraction**,**data transformation** and **data validation**.
- Part of **Model building** and **Evaluation**.
- Experimented with logistic regression,Naive bayes ,also with tree models like decision trees ,Random forest and XGboosting.
- XGBoosting performed better in bug priority prediction with an **AUC score** of 86% and with decent precision,recall and F1-measure for different classes of target priority variable.

Strategy Formulation

- Contributing to the formulation of strategies across business unit, **distribution channels** and product lines.
- Delay in the Maintenance releases with fixes to customer raised complaints or defects caused client dissatisfaction and Escalations.
- Contribution to BUG triage in development of automatic assist model which increased the speed and accuracy at which a bug can be assigned with priority.
- Accelerated the defect resolution time by **Automation of bug priority** which in turn improved customer satisfaction

NBO Report Generation & Comparison

- Creating,deploying and maintaining **CICD pipeline** for NBO reports generation and comparison
- Generated report data across two code versions are compared and any difference introduced due to code changes are **reported to dev**
- Programmed **Framework** using Business driven Development framework with c#
- Conducted and participated on **knowledge sharing** session of NBO application