K X Vinay Jose

Software Engineer

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🎓 Education

National Institute of Technology, Karnataka   2018 – 2020
M.Tech in Design & Precision Engineering   *CGPA: 8.47/10*

🥧 Experience

Hyreo Inc.   Apr '22 – Present
Senior Software Engineer   *Trivandrum*

> Leading the chatbot engineering team to deploy & maintain NLP powered chatbots for our portfolio SaaS software - 65% candidate queries automated, 5 new MNCs onboarded

> Developed the chatbot and API layer for the new Candidate Relationship Management (CRM) SaaS product - faster feature deployments using new architecture, reducing client onboarding times by a factor of 3

> Initiated performance monitoring procedures for all client chatbots to promote responsible AI practices and improve answering accuracy from 61% up to 89%

Skills: Python, RASA, NLU, Flask, REST API, Shell, MongoDB, SQL, Git, Microsoft Azure, Docker, Kubernetes, Jenkins CI, Jira

Tata Motors Ltd.   Jan '21 - Apr '22
Senior Manager   *Pune*

> Worked in Product Development - coordinated digital design, validation & testing, prepared DFMEA reports

> Analysed issues with supplier contributions based on customer feedback to detect defects & report findings

Skills: Product development, Supplier management, Customer centricity, VBScript, MS Excel, Catia V5 macros

Tata Motors Ltd.   July '19 - June '20
Research Intern   *Pune*

> Developed & trained a novel neural network model to predict the solution of a conventional 2D Topology Optimization problem

> Posed as an image segmentation problem, a U-Net based solution methodology was proposed

> ResNet modules used in encoder-decoder networks to achieve accuracy (93.7 % in test dataset) higher than previously published models

Skills: Python, Computer Vision, SQL, Scikit-learn, Pandas, NumPy, Pytorch, VBScript, Catia V5 Macros

</> Projects

Intelligent Virtual Assistant with NLU for CRM - SaaS product   [developed at Hyreo Inc.]

> Developed a chatbot from scratch using RASA framework for candidates to raise concerns & answer queries using NLU, REST API layer built using Flask to handle business requirements

> MongoDB used to store chat history data, application deployed to Kubernetes cluster using Jenkins CI

> The new virtual assistant architecture enabled faster feature shipments - reducing client onboarding times by a factor of 3

Atliq Technologies Sales Data Analysis & Visualization using MySql, PowerBI   [»github«]

> The real sales data of Atliq Technologies was cloned from CodeBasics github repository (made publicly available for academic purposes)
> MySql was used for data wrangling and analysis, PowerBI Desktop was used to create a visualisation dashboard
> Insights were drawn on zone-wise sales all over India and identify top products, sales/profit margins in different cities

Personal Crypto Portfolio Optimization using Machine Learning

> Incorporated portfolio diversification theories and machine learning to optimise returns from pure crypto portfolio of Top 10 cryptocurrencies
> Prediction of cryptocurrency prices done using AutoTS and LSTM models, portfolio optimised using Markovitz mean variance portfolio theory
> Achieved best results from LSTM model - 0.056 RMSE average. The predicted values were used to optimize the portfolio diversification strategy

Mutual Fund Portfolio Performance Prediction Analysis - Case Study

> Predicted the profitability of HDFC Nifty Bank ETF - one of the top ETF funds in India
> Compared the results predicted using Random Forest Classifiers and LSTM models
> LSTM Model outperformed Random Forest Classifier by a factor of 1.78. The better model was used to predict the NAV of HDFC Nifty Bank ETF with an RMSE value of 6.65

Other Projects

> Automation tool to test and report chatbot model accuracy for real data provided by users
> Descriptive & Predictive Analyses of COVID-19 Student Learning Loss using R
> Data Analysis and Visualization of Atliq Sales DB using MySql, PowerBI
> Exploratory Data Analysis and Data Visualization for Gender Gap Study in Employees Database using SQL and Tableau
> Fake Job Postings Classifier using Random Forest Classifier and other models

⚙ Skills

Programming   Python, Machine Learning, NLP, Shell, SQL, MongoDB
Technologies & Tools   Git, Microsoft Azure, Docker, Kubernetes, Jenkins, Jira
Frameworks   RASA, Flask, Scikit-learn, Pandas, NumPy, Pytorch

🏆 Achievements & Certifications

> Qualified in 97th percentile for GATE 2018
> Practical Deep Learning for Coders by Jeremy Howard of fast.ai in September 2021
> Data Visualization using Power BI from Skillsoft in June 2021
> SQL - MySQL for Data Analytics and Business Intelligence on Udemy in June 2021
> Python Fundamentals course from Skillsoft in May 2021