

K X Vinay Jose

Senior Software Engineer

Last updated on April 28, 2023.

+91 854 757 4174

vinayjose1510@gmail.com

in /kxvinayjose

/vinay-jose

Education

National Institute of Technology, Karnataka

M.Tech in Design & Precision Engineering

2018 – 2020

CGPA: 8.47/10

Experience

Hyreo Inc.

Senior Software Engineer

Apr '22 – Present

Trivandrum

- Leading the engineering team to deploy & maintain NLP powered chatbots for our portfolio web applications - onboarded 5 new clients.
- Developed the chatbot and REST API layer using RASA, Flask for the new Candidate Relationship Management (CRM) product - faster feature deployments using Jenkins pipeline, reduced client onboarding times using new RASA architecture.
- Initiated performance monitoring procedures for all client chatbots to promote responsible AI practices and improve answering accuracy from 61% up to 89%.

Tata Motors

Senior Manager

Jan '21 - Apr '22

Pune

- Worked in Product Development - coordinated digital design, validation & testing, prepared DFMEA reports and documentation.
- Collaborated with senior management to identify and prioritize new ML ideas for development and launch.
- Analysed issues with supplier contributions based on customer feedback to detect defects & report findings.

Tata Motors

Research Intern

July '19 - June '20

Pune

- Designed, implemented and evaluated a modified U-Net by combining with ResNet modules and quickly determined application viability.
- Achieved the pre-determined objectives to fulfill the requirements of post graduation from NITK Surathkal.

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

Projects

Intelligent Virtual Assistant with NLU capabilities

[developed at Hyreo Inc.]

- Developed a chatbot from scratch using RASA framework for candidates to raise concerns & answer queries by 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 reduced client onboarding times by a factor of 3.

Accelerated Topology Optimization using ResNet-based Modified U-Net

[developed at Tata Motors]

- › 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 data) higher than previously published models.

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.

Data Analysis and Visualization of Atliq Sales DB using MySQL, PowerBI

- › The real sales data of Atliq Technologies was cloned from CodeBasics Github (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.

Other Projects

- › Developed automation tool to test and report chatbot model accuracy for real data provided by users.
- › 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.
- › Facial Detection and Classification Pipeline on custom image dataset.

Achievements & Certifications

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