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# K X Vinay Jose

Software Engineer

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## Education

### National Institute of Technology, Karnataka

M.Tech in Design & Precision Engineering

2018 – 2020

CGPA: 8.47/10

## Experience

### Dbiz.Ai

Software Engineer

Feb '24 – Present

Bangalore

> Built an Autonomous Multi-Agent System for portfolio product using LLMs - GPT-4, Openhermes, etc.

**Skills:** Python, LLMs, RAG, Langchain, CrewAI, FastAPI, Shell, MongoDB, AWS, QdrantDB, ReactJS

### Hyreo Technologies

Software Engineer

Apr '22 – Sep '23

Trivandrum

> Led the team that developed SaaS Virtual Assistants - 65% queries automated, 5 MNCs onboarded

> Implemented new chatbot architecture for faster deployments - reduced client onboarding times by 3x

> Initiated performance monitoring process for all client chatbots and improved accuracy from 61% up to 89%

**Skills:** Python, NLP, Flask API, RASA, Shell, MongoDB, SQL, Git, Docker, Microsoft Azure, K8s, Jenkins CI, Jira

### Tata Motors Ltd.

Senior Manager

Jan '21 - Apr '22

Pune

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

> Analysis of supplier issues and customer feedback to detect defects & create dashboards

**Skills:** Product development, Customer centricity, Stakeholder management, VBScript, MS Excel, Catia V5

### Tata Motors Ltd.

Research Intern

July '19 - June '20

Pune

> Completed the project: **Accelerated Topology Optimization using ResNet-based Modified U-Net**

> Developed an ML architecture from scratch to predict the solution of 2D Topology Optimization problem

> Posed as an image segmentation problem, a U-Net model with skip connections like resnet was used.

> Achieved results with accuracy (93.7 % in test) higher than previously published models

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

## Projects

### Intelligent Virtual Assistant with NLU for CRM - SaaS product

[developed at Hyreo Inc.]

> Developed chatbots using RASA framework for users to raise concerns & answer queries using NLU

> Built REST API layer using Flask for ticketing and operations - handles 100k requests per month

> The new bot architecture enabled faster feature shipments - enabling 3x faster client onboarding

### Multi-Agent system to chat with Open Source Github Repositories

> Used crewAI framework to create different RAG agents to load the files from github, create vectors and extract information

> Powered the LLMs using Gemma LLM API endpoint from Google.

## Atliq Technologies Sales Data Analysis & Visualization using MySQL, PowerBI

[>>demo<<]

- > The real sales data of [Atliq Technologies](#) was cloned from [CodeBasics](#) (made public for academic purposes)
- > MySQL was used for data wrangling and analysis, PowerBI used to create a visualisation dashboard
- > Insights were drawn on zone-wise sales all over India and identify top products, sales/profit margins, etc.

## 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
- > Mutual Fund Portfolio Performance Prediction Analysis - Case Study
- > Data Visualization & Descriptive Analytics for Gender Gap Study in Employees DB using SQL and Tableau
- > Fake Job Postings Classifier using Random Forest Classifier and other models

## Skills

**Programming** Python, LLMs, Computer Vision, NLP, Shell, SQL, MongoDB, ReactJS, NodeJS

**Technologies & Tools** Git, Microsoft Azure, AWS, Docker, Kubernetes, Jenkins, Jira

**Frameworks** LangChain, Flask, Pandas, NumPy, Pytorch, Scikit-learn, RASA, ExpressJS

## Achievements & Certifications

- > Recipient of the annual excellence award, "Making a Difference", at Hyreo Technologies in December 2022
- > Qualified in 97th percentile for GATE (Mechanical Engineering) 2018
- > Ranked in the top 1% of students nationwide in the CBSE 12th board examinations in 2013
- > Practical Deep Learning for Coders by Jeremy Howard of fast.ai in February 2024