Poonam Kumari

Data Scientist/ Python Developer/ AI, ML Engineer/ CAD Developer

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https://www.linkedin.com/in/poonam-k-pythondeveloper-data-scientist-immediate-joiner/

SUMMARY

● An Engineer with 2.5 years' experience in CAD development with C++ and Python libraries. ● Experienced in developing Machine learning & Artificial Intelligence projects using python, R, NLP, AI/ML, Deep Learning & Neural networks ● Extensively worked on debugging application for fixing bugs and Production support ● Highly motivated with the ability to work effectively in teams as well as independently. Team player with excellent interpersonal skills, self-motivated and dedicated ● Skills used in project: Python, C++, VB.Net, Open Cascade, CAA, CATIA, NX

EXPERIENCE

Python & Machine Learning Engineer Dec '23 — Feb '24
SACHA Engineering Bengaluru, India

- Working on optimization problem in machine learning project using python libraries, ML algorithms &SQL, UI creation in python using PyQT

Solution Developer Dec '21 — Dec '23
Tata Technologies(TTL) Bengaluru, India

- NX Customization using Open Cascade and C++ Developing VB.Net and CAA CATIA automation application for automotive parts Developing CATVBA macros in CATIA using VBA

Programmer Analyst Trainee Sep '21 — Nov '21
Cognizant Technology Solutions Kolkata, India

- Developed a weather app using angularwith bootstrap for responsive UI. Integrated API, fetched data, and ensured deployment for seamless user experience

Research Intern Jun '20 — Aug '20
Central Mechanical Engineering Research Institute, Ministry of S&T, Govt. of India Durgapur, India

- Developed a C++ simulation program to model the behavior of mechanical systems, showcasing proficiency in programming and problem-solving skills

Research Intern Dec '19 — Jan '20
Indian Institute of Technology Indore, India

- Analysis of Waste heat recovery from engine exhaust using Artificial neural network(ANN) based analysis of vehicle exhaust waste heat recovery potential using a Rankine cycle.

EDUCATION

Master's in Data Science, International Institute of Information Technology(Pursuing) (GPA: 3.44) Nov '22 — Dec '24
Bangalore, India Bengaluru, India

B.Tech in Mechanical Engineering, Rajiv Gandhi Proudyogiki Vishwavidyalaya (GPA: 8.51) Jul '17 — Jul '21
Gwalior, India Gwalior, India

12th in Science, Kendriya Vidyalaya (GPA: 7.8) Jul '16 — May '17
BKSC, India India

10th in Science, Kendriya Vidyalaya (GPA: 9.2) Apr '14 — May '15
BKSC, India India

PROJECTS

Bar code and QR code reader with python

- Developed a tool in python and python which Recognize and decode the barcode / QR code that we are going to show to the camera using Pillow, OpenCV and Pyzbar.

Image reading using python

- This project is done in python which reads 2D image and finds the dimensions needed in the drawing by using some of the ML concepts like CNN, OpenCV, Matplotlib.

Age and Gender detection with python

- This project involves using computer vision techniques to analyze facial images and predict the age and gender of individuals. Skills required include Python programming, image processing, and machine learning algorithms.

Credit card fraud detection model

- Digital transactions in India registered a 5 1% growth in 2018–2019, their safety remains a concern. Fraudulent activities have increased severalfold, with approximately 52,304 cases of credit/debit card fraud reported in FY 2019 alone, so worked on a machine learning model that is capable of detecting fraudulent transactions.

Sentiment Based Product Recommendation system

- The objective of this project is to analyse the reviews of the products by different customers and provide suggestions to help improve them Data preparation by using Machine learning algorithms, Model building, Model evaluation, Model deployment

Classification with Neural Networks using Python

- This project involves training a neural network for image classification using Python, focusing on the fashion dataset. Skills required include Python programming, neural network architecture design, data preprocessing, model training, and evaluation.

Powertrain Move

- Working on the tool where we are analyzing the engine mount performance to make the vehicle performance better, Skills used: C++, Open Cascade, NX and VB.Net, Mathematical & Physics concepts

Manufacturing Planner

- Working on a stand alone python application, which provides initial feasible solutions for planning problems encountered in manufacture of automotive assemblies, with the help of machine learning, and python libraries(pyomo, scipy, Matplotlib, Tensor Flow, PyTorch) The output from the application includes, but it's not limited to: 1. Gantt charts showing various tasks and their durations, sorted robot-wise and station wise. 2. Detailed information about the layout of the station network, showing the stations, robots and parts. This is used for creating a layout inside a CAD system.

Double Line Checker

- Developed a tool with vb.net and CAA interface to segregate the overlapping generated curves in a drawing view and allow the user to hide the over lapping curve

Hole chart

- Developed a tool with vb.net and CAA interface to extract holes from the part or product on the topological level Recognize and decode the barcode / QR code that we are going to show to the camera.

CMM Vector creation tool

- Tool will create vector with respect to the user input & user can create different types of vectors such as surface, datum &hole vectors and tool will add the attribute of the created vector in geo set using CAA and vector can be exported to drafting

SKILLS

Data Science Technologies Machine Learning Algorithms, NLP, LLM, OpenCV, Deep Learning, PyQt, Statistics, Big Data, Artificial Intelligence, GenAI

Programming Languages Python, R, MATLAB, C++, OOP, STL

CAD Customization CATIA V5, UG-NX, CAA

OS and Platforms Linux, Docker, Kubernetes, Windows, Powershell

IDE Visual Studio, Jupyter noteboook, Spyder, Github, Pycharm, VSCode

PUBLICATIONS

Artificial Neural Network based prediction and waste heat recovery from engine exhaust, https://www.ijeast.com/papers/199-211,Tesma409,IJEAST.pdf **Jan '20**
International Journal of Engineering Applied Sciences and Technology (IJEAST)