RAJ KUMAR PAL

Bangalore, Karnataka, INDIA | raajkumarpal@outlook.com | +91 9903033142 | linkedin.com/in/raj-kumar-pal/

SUMMARY:

Proficient Design Engineer with expertise in Machine Learning and Deep Learning, possessing over 3+ years of experience in designing and building models and systems across diverse industries. Skilled in data gathering and analysis, improving existing models, and reorganizing business processes to deliver compelling value to major clients. Capable of working collaboratively with high-performing individuals to design DL frameworks and solutions to reduce costs and maximize time for corporate success.

PROFESSIONAL EXPERIENCE:

Design Engineer – Image Processing (Research & Development Unit) — Oct'22 – Present
Panacea Medical Technologies Pvt. Ltd. — Bangaluru, INDIA
Computer Vision & Deep Learning

- Contributed to the development, testing, and validation of **in-house products** by assisting in model creation.
- Conducted research and implemented **state-of-the-art algorithms** to achieve highly accurate object detection results.

System Design & Product Improvement

- Designed and developed an **analysis system** to improve data processing and analysis capabilities.
- Conducted extensive research and successfully developed **advanced algorithms** to significantly enhance the **precision of detection.**
- **Optimized methods** to reduce **time complexity** for communicating **IoT devices** and **data-tier applications**.

Image Processing Intern – Machine Learning & AI — Jun'22 – Oct'22
Cube Highways and Transport Assets Advisors Pvt. Ltd. — Hyderabad, INDIA
Deep Learning

- Designed and applied various **deep learning algorithms** for detecting **in-house** products, like identifying safety and protective-gear equipment related to road safety and tracking some other Cube properties at the roadside.

Predictive Modelling

- Built a **predictive model** to analyse toll gate revenue, based on the passing of vehicles and forecast it.

System Analyst — Nov'18 – Apr'20
Cognizant Technology Solutions India Pvt. Ltd. — Kolkata, INDIA

- Had responsibility for monitoring server-related issues on Linux and Windows servers using **IPMON** and **I-DRAC**, such as Physical Memory Utilisation, Disc Management, or Disc Space Alert.
- Developed a new format for reporting various alerts, including those related to App Manager and App Dynamics, Print Server and Service validation, Home Drive issues, CPU alerts, SOC logging, Generic WMI Down, Printer DCA Service Down Alerts, and other work like installing a Windows patch for 2016 Windows servers, adding new servers, and removing old, out-of-date servers.

EDUCATION:

Master of Technology – Data Science and Machine Learning — Jul'20 – Jul'22
PES University, Electronics City Campus — Bangaluru, INDIA
Project – Self Driving Car Based on Human Driving Nature
Description – Working on **virtual simulator** and **CNN algorithm** to rectify human errors and makes a better technology for **autonomous self-driving cars**. This project is focused on training an autonomous car in the simulator which can handle the curve roads and hill areas.
Project – YOLO Based Social Distancing Violation Detection (**Paper URL:** https://ijcsmc.com/docs/papers/October2021/V10I10202110.pdf)

Bachelor of Technology – Computer Science and Engineering — Sep'14 – May'18
Hooghly Engineering and Technology College - 176 — West Bengal, INDIA
University Name: Maulana Abul Kalam Azad University of Technology, formerly known as West Bengal University of Technology
Project – Smart Shopping System with IoT and Cryptography

KEYSKILLS:

ML Algorithms	**Computer Vision**	**Predictive Analysis**	**Statistics Modeling**
Data Analysis	**Data Visualization**	**Natural Language Processing**	**Generative AI**

TECHNICAL SKILLS:

Tools: Jupyter Notebook, VS Code, Python, SQL, AWS, MongoDB, Spark, GitHub/ GitLab, Linux, etc.
Packages: Scikit-Learn, Numpy, SciPy, Pandas, GeoPandas, NLTK, Matplotlib, Statmodels, etc.
Statistics/ Machine Learning: Statistical Analysis, Linear/Logistic Regression, Clustering, Regularization, XGBoost, LGBM, etc.
Computer Vision & Deep Learning: Frameworks - PyTorch, TensorFlow, Darknet; **Algorithms** - CNN, RNN, MLPs, LSTM, GANs, etc.

ACHIEVEMENTS:

Great Learning Hackathon – Sunspot Count Forecasting — May'21 – May'21
Great Learning Hackathon – Predict Severity of Injury — Jun'21 – Jun'21

INTERESTS:

Reading Scientific and Motivational Books, Drawing, Bike Riding