NitinKumara Reddy R M

Machine Learning Engineer

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Profile Summary:

- Data scientist with 3 years of experience specializing in statistical analysis, machine learning, and data modeling.
- Expertise in deriving actionable insights from complex datasets to drive data-informed decision-making.
- Strong analytical mindset with a keen eye for identifying hidden patterns, trends, and outliers.
- Proficient in advanced problem-solving techniques, leveraging statistical methods and machine learning algorithms.
- Capable of working autonomously or collaboratively in cross-functional teams to deliver data-driven solutions.
- Committed to producing high-quality, scalable, and impactful results that align with organizational objectives.

Skills:

- ✓ **Programming Languages**: Python, Java, C++, SQL.
- ✓ **Machine Learning Frameworks**: TensorFlow, Keras, scikit-learn, Langchain.
- ✓ **Tools & Libraries**: Pandas, NumPy, Matplotlib, OpenCV.
- ✓ **Modeling**: Regression, Classification, Dimensionality Reduction.
- ✓ **Deep Learning**: Neural Networks, CNNs, RNNs.
- ✓ **NLP**: Text Classification, Named Entity Recognition.
- ✓ **Version Control**: Git.
- ✓ **Databases**: SQL.
- ✓ **Data Visualization**: Tableau, Seaborn.

Professional Experience:

Machine Learning Engineer - Tata Consultancy Services   (March 2022 - Present)

- Implemented a model pipeline using **R-CNN** models for the precise detection of barcodes and addresses(Text) within parcel images.
- **Integrated** Python libraries like **EasyOCR** for **OCR (Optical Character Recognition)** and **OpenCV** for image **preprocessing** and enhancement.
- Applied **distortion correction**, **image enhancement**, and **region-of-interest (ROI)** optimization techniques to improve detection accuracy.
- Focused on **barcode** and **address** regions, providing structured output with **barcode information** and **shipping addresses**.
- Achieved an **impressive 96% accuracy rate** in address detection.
- **Developed** an automated **spam email detection** model using the **Naive Bayes** algorithm, leveraging **probabilistic classification**.
- Analyzed email content, **metadata**, and patterns such as **suspicious links**, **spam keywords**, and **sender information** for improved classification.
- Applied **Natural Language Processing (NLP)** techniques, including **stopword removal** and **vectorization (TF-IDF)**, to convert email text into **numerical features**.
- Trained the model on a labeled dataset, enabling efficient spam classification and continuous **model optimization** through feedback loops.
- **Developed** a system for recognizing both **handwritten** and **printed text** in scanned documents using **Convolutional Neural Networks (CNNs)**.
- Incorporated **preprocessing**, **normalization**, and **data augmentation** techniques to enhance model robustness and **generalization**.
- Achieved **93% recognition accuracy**, improving document digitization for industries like **banking**, **healthcare**, and **archives**.
- **Designed** and developed an **employment dashboard** in **Tableau** to provide actionable insights for **workforce management**.
- Analyzed employee demographics (**age**, **gender**, **department**) and assessed **diversity** metrics.
- Visualized **employee engagement** metrics, including **satisfaction surveys**, **retention rates**, and **eNPS** (Employee Net Promoter Score), to monitor organizational health.

Education:

- **Bachelor of Engineering** – Electronics and Communication Engineering (ECE), CGPA –7.68/10   **(2017 – 2021)**

  Acharya Collage of Engineering, Bangalore