Manohar Palanisamy

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WORK EXPERIENCES

Senior Associate - Machine learning **Dec 2023 – Dec 2018**

Sevasys Technologies *Bangalore*

- Contributed to POC projects in Generative AI, implementing end-to-end ML solutions with OpenAI, Langchain, Gemini AI and Open source models like Huggingface.
- Collaborated cross-functionally to brainstorm, prototype, and iterate ML solutions, gaining practical experience in real-world applications.
- Integrated ML models into existing systems, optimizing performance and scalability for production deployment.
- Contributed to team efforts in research and development, staying abreast of the latest advancements in machine learning technologies.

Executive Software Developer **Dec 2018 – Jan 2017**

QuantumLink Communications Pvt Ltd *Mumbai*

- Developed a research-based web application called FieldSense. This project involved creating a Salesforce tracking system to monitor salesperson activities.
- Responsible for handling feature enhancement and *bug* fixing related to our products which also included understanding the requirements and preparing design documents and Impact Analysis.
- Worked on an email system with full knowledge of network and email protocols, ensuring timely delivery and quality, all in line with the client's quality standards.

TECHNICAL SKILLS

Generative AI: OpenAI, Langchain, HuggingFace, Google Generative AI,

Artificial Neural Networks: Perceptron, MLP, CNN, RNN, LSTM, GRU, BRNN, Autoencoders, GAN, Residual Net, Transformers, ChatGPT, Gemini Pro, Gemini Pro Vision.

ML Model And Algorithms: Linear Regression, Logistic Regression, SVM, Gradient Descent, SGD, minibatch GD, Adam etc.

Coding Skills: Scripting and web development including Python (NumPy, scikit-learn) , Streamlit, Java, REST API, HTTP Server, Mail protocols and DNS server

Deep Learning Frameworks: TensorFlow, Keras, PyTorch

Natural Language Processing: NLTK (Natural Language Toolkit), spaCy

Model Evaluation: Cross-validation, ROC curve analysis, Confusion matrix, Grid search, Hyperparameter tuning

Deployment: Docker, Kubernetes, Huggingface Spaces, Vercel, CloudflareCDN

Cloud Platforms: AWS

Software Development: Agile methodology, Continuous Integration/Continuous Deployment (CI/CD), GitHub Actions

Database Management: MySQL, MongoDB, Pincone Vector Database

Version Control: Git

CERTIFICATIONS

Generative AI with Large Language Models [MAVEJZ9P9AV5] **Apr 2024 – Sep 2023**

DeepLearning.AI And Amazon Web Services *Coursera.org*

Deep Learning Specialization [EKJCGU5G2NXF] **Feb 2024 – July 2023**

DeepLearning.AI *Coursera.org*

Machine Learning Specialization [2CE3DQW8Z2NG] **Feb 2024 – Jun 2023**

Stanford University And DeepLearning.AI *Coursera.org*

Applied AI with DeepLearning [DRENBUK43NW8] **Jan 2022 – Dec 2021**

IBM *Coursera.org*

PROJECTS

Gemini Pro: Text-to-SQL Query Generation | *Python, Gemini Pro, SQLite, Streamlit, Huggingface Spaces* **Live**

- Developed an end-to-end project utilizing the Google Generative AI - Gemini Pro Model.
- Created a user-friendly interface using Streamlit for text-to-SQL query generation.
- Designed and implemented functionality to extract information from SQLite databases based on user input prompts.
- Utilized Huggingface Space deployment for seamless integration of AI models, making it accessible via the web at https://huggingface.co/spaces/ManoharPalanisamy/TextToSQLGenerativeAI

ChatGPT MCQ Generator | *OpenAI API, chatgpt-3.5-turbo, Langchain, Streamlit UI, AWS EC2, Huggingface Spaces*

- Created a modular MCQ Generator using the OpenAI API, chatgpt-3.5-turbo model, Sequential Langchain, and Streamlit UI.
- Utilized advanced natural language processing capabilities to get user inputs and subject-specific data to generate multiple-choice questions (MCQs).
- Presented MCQs in a user-friendly table format via Streamlit UI and deployed the project on AWS EC2 for accessibility and scalability.

Gemini Pro Vision: The Future of Invoice Data Extraction | *Python, Gemini Pro Vision, Huggingface Spaces* **Live**

- Developed a cutting-edge solution to automate invoice processing using Google Generative AI Gemini Pro Vision Model.
- Leveraged image-to-text conversion and advanced NLP techniques to extract key information from invoices with precision and accuracy. I have Used the Streamlit interface for designing the application.
- Integrated Huggingface Spaces for deployment and management, making it accessible via the web at https://huggingface.co/spaces/ManoharPalanisamy/InvoiceExtractor

Image Classifier | *Python, FastAI , Render* **Live**

- Developed an advanced image classifier using the ResNet50 neural network architecture from the Fastai deep learning library.
- Trained the model to classify images of Marvel Heroes into 12 distinct classes.
- Leveraged the powerful capabilities of Fastai for efficient training and model evaluation.
- Hosted the final trained model on Render, making it accessible via the web at https://project.decodeai.in

Distributed Deep Learning with Horovod and MPI | *Python, Horovod, MPI* **May 2018**

- This project focuses on speeding up deep learning training by distributing the workload across multiple computers.
- It uses Horovod, a tool for distributed training, and MPI, a communication protocol. By doing this, we can train models faster and use computing resources more efficiently.
- Through this project, I learned how to use advanced tools to make deep learning training faster and more scalable.

PERSONAL BLOG

www.decodeai.in | *JAM Stack, Jekyll, Cloudflare, Vercel, GitHub, ImageKit.io, Umami Analytics, Giscus.app* **Live**

- Regularly publish articles on machine learning, deep learning, and other technology-related topics.
- Cover a wide range of subjects, including tutorials, guides, and insights into the latest developments in the field.
- Provide valuable resources and insights to fellow tech enthusiasts and learners.
- Engage with readers through comments, discussions, and feedback.

PUBLICATION

Fake Account Eliminator **March 2015**

National Conference on Engineering Applications for Developing Smart Cities - NCEADS

- This software is designed to find and remove fake accounts on platforms like Facebook, Gmail, and Twitter in India.
- It uses the UIDAI (Unique Identification Authority of India) as a key part of its operation.
- India has many fake users on social media and email, so this tool helps to identify and eliminate them. It enforces a rule where each person can only have one account, reducing problems for real users and the public.

EDUCATION

Bachelor of Engineering in Computer Science **May 2016**
Dhirajlal Gandhi College of Technology, Anna University *Salem, Tamilnadu*

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