

MANOHAR PALANISAMY

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WORK EXPERIENCES

Senior Associate - Machine learning

Dec 2023 – Dec 2018

Sevasys Technologies

Bangalore

- Led 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, Pinecone 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 [EKJCGU5G2N XF]

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 [DRENBK43NW8]

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

Dhirajlal Gandhi College of Technology, Anna University

May 2016

Salem, Tamilnadu

Last update: April 17, 2024