

# MANOHAR PALANISAMY

☎ +91-7619198038 ✉ [manoharpalanisamy@icloud.com](mailto:manoharpalanisamy@icloud.com) 🌐 [www.decodeai.in](http://www.decodeai.in) 🔗 [linkedin.com/in/manoharpalanisamy](https://linkedin.com/in/manoharpalanisamy)

## WORK EXPERIENCES

### Senior Associate - Machine learning

Current – Dec 2018

*Tata Consultancy Services - Contractor*

*Bangalore*

- Collaborate with data scientists to seamlessly integrate these models into existing systems and applications.
- Maintain the optimization of code for peak performance, ensuring the reliability of machine learning applications.
- Responsible for developing scalable and efficient software solutions, deploying machine learning models in production.
- Stay informed about best practices in software development and meticulously implement them within ML workflows as part of my roles and responsibilities.

### Executive Software Developer

Jan 2017 – Dec 2018

*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.
- Collaborated with team members using version control systems such as Git to organize modifications and assign tasks.

## TECHNICAL SKILLS

**ML Model And Algorithms:** Linear Regression, Logistic Regression, SVM, KNN, Naive Bayes, Decision Tree, Gradient Descent, SGD, minibatch GD, Adam etc.

**Artificial Neural Networks:** Perceptron, MLP, CNN, RNN, LSTM, GRU, BRNN, Autoencoders, GAN, Residual Net

**Coding Skills:** Scripting and web development including Python (NumPy, scikit-learn) , Java, C, JSP, Servlets, Spring Framework, HTML5, CSS3, JavaScript, Ajax, jQuery, Bootstrap3, REST API, HTTP Server, Mail protocols and DNS server

**Deep Learning Frameworks:** TensorFlow, Keras, PyTorch

**Data Manipulation:** Pandas, NumPy

**Data Visualization:** Matplotlib, Seaborn

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

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

**Deployment:** Docker, Kubernetes, Vercel, CloudflareCDN

**Cloud Platforms:** AWS (Amazon SageMaker, EC2, S3)

**Big Data Technologies:** Apache Spark, Hadoop, MapReduce, Pig, Hive

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

**Database Management:** MySQL, MongoDB

**Version Control:** Git

## CERTIFICATIONS

### Generative AI with Large Language Models [MAVEJZ9P9AV5]

Sep 2021 – Feb 2022

*DeepLearning.AI, Amazon Web Services*

*Coursera.org*

### Deep Learning Specialization [WFUWAE7JQ924]

Sep 2021 – Feb 2022

*DeepLearning.AI*

*Coursera.org*

### Applied AI with DeepLearning [DRENBK43NW8]

Sep 2021 – Feb 2022

*IBM*

*Coursera.org*

### Machine Learning [WFUWAE7JQ924]

Sep 2021 – Feb 2022

*Stanford University*

*Coursera.org*

## PROJECTS

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### 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>

### Automate to Extraction of Screen Shots from Photos | *Python, NumPy, Keras*

July 2018

- Trained a Convolutional Neural Network (CNN) model to automate the extraction of screen shot files from photo albums.
- Developed a Python script (extract.py) to execute the extraction process.
- Used Keras' data augmentation pipeline to train the model, which was trained on approximately 1200 images.

### 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

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### [www.decodeai.in](http://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

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### 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

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### Bachelor of Engineering in Computer Science

Sep 2012 – May 2016

*Dhirajlal Gandhi College of Technology, Anna University*

*Salem, Tamilnadu*