**Mohan Babu** Email : mohan.babu65@gmail.com

**Machine learning engineer** Phone : 07405160640

**Experience Summary**

1. Data science and machine learning July 2019 to till date
2. Project manager at Ishan precast solutions LLP July 2012 to March 2019
3. Development of custom trading strategies for TiempoIT March 2008 to 2010
4. Software engineer/Team Lead for YELL.com from Feb2006 to Jul 2008.
5. Design Engineer for GE-Aircraft, India from Feb 2001 to Feb 2006.

**Overview**

1. Worked in varied industries like IT, finance, construction, Aviation and Energy for more than 18 years.
2. 2 years in to machine learning.
3. 16 years of experience in varied sectors like IT, finance, construction, Aviation and Energy.
4. Understanding the business needs and converting them in to functional specifications.
5. Delivering in house trainings to team, Design and developments.
6. High analytical skills, enthusiastic to find solutions to any business issues or development issues.

**Education Summary**

1. Masters in Engineering (IIT madras)
2. Bachelors in Engineering (UVCE, Bangalore)

**Certifications**

**Machine Learning- from Stanford university**

[**https://coursera.org/share/68d7ffe3a200e0b53b8959197e9b5860**](https://coursera.org/share/68d7ffe3a200e0b53b8959197e9b5860)

**Natural Language Processing with Classification and Vector Spaces -stanford university (pursuing other NLP courses)**

[**https://coursera.org/share/9dd30bef2a842c4748e6b78b0fc93843**](https://coursera.org/share/9dd30bef2a842c4748e6b78b0fc93843)

**Natural Language Processing with Probabilistic Models**

[**https://coursera.org/share/6a03be18f516bf7948fcac5e4172f88d**](https://coursera.org/share/6a03be18f516bf7948fcac5e4172f88d)

**six-sigma green belt certified from GE**

**Technical Skill set**

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| **Data science/Machine learning** | 1. Regression, Decision trees, Random Forest, cross validation, clustering, association, dimensionality reduction, association rules, recommender systems, forecasting, text mining, NLP, Gradient boosting and Xgboost, neural networks. |
| **Technologies** | Python, R, octave,Tableau, hadoop, spark, |
| **Other** | java, C#, Unix , .net, Java, C#, FEM,UG, Stad, Autocad |
| **Web Development** | HTML, DHTML, Java script, CSS, XML. |
| **Version control tools** | **Rational Clear case** |
| **Database** | Oracle, SQL Server, MS access |
| **Operating Systems** | Linux, Unix, Windows-NT, Windows |
| **IDE Tools** | **Eclipse, Visual Studio , Jupyter** |
| **Tools** | SQL Navigator, Oracle Enterprise Manager, Clear Quest, Remedy |

**Experience Profile**

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| **Self-employed and learning machine learning – July 2019 to current** |
| **Skills**  R, Python, Machine learning models. Deep learning, Tableau,  **Database** SQL Server  **Operating System** Windows |

**Skills Used**R, Python, Machine Learning, Deep learning, Tableau, and SQL

**Summary**

**Machine Learning**

* Extracting the data form Data base
* Data pre-processing and Data analysis using python and R
* Data visualisation using different plots.
* Building the models ML models
* Performed Model Evaluation
* Forecasting using time series
* Understanding of different machine learning algorithms

**Self –employed**

* Project feasibility study and cost analysis for setting up gym
* Project execution.

**Projects:**

Reduce size of image using k-means:

Aim is to reduce the size of the image with reduced colour combinations. Our general image would be 24 bit RGB representation. This is converted in to a 4 bit image representation using K-means algorithm.

CNN for Hand written number recognition:

CNN is used to recognise hand written digits. Trained the model using training set. Forward and backward propagation coding was implemented. Using the trained model obtained the Theta parameters. The digits of image of 20X20 pixel were used for this project.

SVM spam email classification: Based on the contents in the email this classifer identifies whether the email is spam or not. in this I wrote code to pre-process the email and extracting the features of the email in a format where it can be read by SVM classifier.

Anomaly detection using Gaussian distribution: Different computer server data has been obtained to analyse the detection of faulty server before it completely fails. Gausssian distribution is run using these data. Using this it became easy to identify the faulty server.

Recommendor systems for movie rating: Collaborative filtering Technique is used for recommending a movie to the user. Coding was done to implement cost function and gradient function.

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| **Ishan precast solutions LLP July 2012 to March 2019** |
| **Project Civil constructions**  **Role**  project Manager |
| **Skills**  STAD, AutoCAD.  **Operating System** Windows |

**Summary**

* Project preparation and estimation and costing. Design of structural elements in line with IS codes. Analysis of stresses and life
* Project management. Preparation of project schedule.

**Responsibilities include**

* Design of structural elements in line with Architectural design.
* STAD Design. Structural drawing using AutoCAD.
* Supervising the construction site.
* Attending project progress meeting with contractors and onsite engineers.
* Ensured the safe, cost-effective and timely completion of all projects to meet expectations set.
* Maintained excellent relationships and stayed in constant contact with all contractors.
* Undertaking and supervising technical site surveys.

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| **TiempoIT, Oct 2008 to Dec 2010** |
| **Project Trading Strategies**  **Role**  Project leader |
| **Skills**  multi-Threading, C#  **Operating System** Windows |

**Summary**

* **High Frequency, Real time data streaming of Stocks tick data**
* Automated Trade Execution Strategy – with StopLoss and ProfitTake barriers
* Tier execution – Splitting trade into n Tiers, and tiers can be separated by configurable number of ticks.
* Multi-threading environment.

**Responsibilities include**

* Worked through all the phases of project life cycle – Design & Development, System testing & Unit testing, Implementation & Support
* Design and analysis workshops with the analysts and testing strategies
* Responsible for development and implementation of trade strategies
* Short/Long Break down, Short/Long Reversal
* Tiered execution of trade into 3 Tiers
* Automatic cancellation of trades
* Testing strategies built on the simulated data feed, which is real-time and close to live
* Worked in a team of 5 with 2 analysts and 3 developers, with analysts and development team.

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| **YELL.com, London – Feb 2006 to Jul 2008** Working as consultant through Wipro Consulting |
| **Project Sales/Marketing IT Systems**  **Role**  Team lead SAP |
| **Skills**  SAP, ABAP  **Operating System** Windows |

**Summary**

* Bulk Data Migration of Rates legacy database to new IT system
* Email as mode of communication channel for Order Confirmation & Deployment
* “On the Move” – New project, involves introduction of 3 new advertising methods to the existing methods. This includes changes to the existing programs at pricing, renewals, content capture, Ceiling of rates and all other related screen designs

**Responsibilities include**

* Worked through all the phases of project life cycle – Design & Development, System testing & Unit testing, Implementation & Support
* Team consists of 10 members in total split across UK and India
* Different functional modules involved
* Reports built with dynamic user input with customizable columns
* Pricing routines
* Implementation challenge is to meet the expectations of all the different teams involved – Sales & Operations, Finance teams, Product Control, and Reconciliations team

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| **GE Aircraft engines, US/India – Feb 2001 to Feb 2006** |
| **Project Aircraft engines modelling**  **Role**  Senior Design engineer/Team lead |

**Summary**

* Work along with team of 30 design engineers, with team split across Greenville, US and Bangalore India.
* Interact and Work along with other teams including Combustion team, Structural team, CFD team
* 3D Linked FEM Modelling Environment in UG and ANSYS.
* Creating custom tools using ANSYS, C, perl, Shell scripts
* Analysing the Clearance data of start up and shut down cycle for Aircraft Engines
* Gas Turbines – Elastic/plastic behaviour of metals in reverse plasticity
* Finite element modelling for different Stress intensity factors.

**Responsibilities include**

* Design & Development of FE Models, System testing & Unit testing, Implementation & Support
* Using the 3D models of components of the aircraft engines prepare them for FE analysis
* Get the different forces on the boundaries of the components and apply them to the models
* Run the models for FE analysis.
* Analyse the results, include checking the clearance between casing and blades or other components for different cycles of the engine
* Presenting the results to team to discuss the behaviour and suggest the changes to design.