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# VIJAY WAGHMARE

## Data Analyst

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### SUMMARY

Ardent data analyst with Masters in Data Science coupled with two postgraduate degrees in Finance. Passionate to learn, adapt, innovate and use machine learning and deep learning models/algorithms to identify and solve real world problems. Independently implemented machine learning and deep learning models in time and frequency as Casual Research Assistant at Deakin University. Offering 12 years of transferable experience in using statistics for data driven business and operational decisions; designed and implemented automation and financial modeling using VBA across investment banking and finance domain.

### WORK EXPERIENCE - DATA ANALYSIS

#### Deakin University

Melbourne, Australia

##### Casual Research Assistant

Dec 2020 - Current

- Developed machine learning models to predict physical fatigue level of workers in workplace (manufacturing/warehouse industry) using IMU sensor data from existing research paper (DOI - 10.1016/j.apergo.2017.02.001).
- Timeseries classification problem was solved using SVM regression for multi-class with 1.33 MAE and Logistic Regression for binary class problem with sensitivity and specificity of 92% on test dataset. Original paper had achieved 2.16 MAE for multi-class; sensitivity and specificity of 0.65 and 0.70 respectively.
- Data pre-processing included integration, singular value decomposition and robust scaler.
- Writing research paper on completed projects.
- Developed human activity recognition model for three activities in workplace using Linear Discriminant Analysis with ROC of 98% for two activities and 96% for third activity. GitHub: <https://vwaghmare111.github.io/post/project-1/>

#### Risk Management Associates

Pune, India

##### Business Analyst

May 2018 - Jan 2019

- Developed integrated and interactive "Borrower's Risk Rating Model" in MS Excel using VBA macros for service, manufacturing, and trading industry for a PAN ASIA Bank, Sri Lanka.
- Developed project financial feasibility with Sensitivity analysis and Monte Carlo simulation in MS Excel using VBA and imparted training to bankers in Nepal on behalf of INTL MANAGEMENT INSTITUTE OF NEPAL (IMI).

GitHub: <https://vwaghmare111.github.io/excel/>

### SELECTED PROJECTS

#### Stock price forecasting (Frequency - daily)

- Created web application using Machine learning API. End-to-end deployment of machine learning model using Flask, html and Heroku (Platform as a Service - PAAS).
- Multivariate regression model using Granger Causality statistical test to identify statistically significant lagged relationship between independent and dependent variables.
- Forecast period is dynamic and is equal to significant lags as per Granger Causality statistical test for each stock.

Web App: <https://stock-price-forecast-api.herokuapp.com/>.

GitHub: <https://vwaghmare111.github.io/post/project-11/>

#### PySpark SQL - Classification and Clustering

- Clustering and classification on FIFA-19 Kaggle dataset extracted from FIFA database.
- Kmeans, Logistic Regression, Naive Bayes, Multilayer Perceptron Classifier was used with cross-fold validation.

GitHub: <https://vwaghmare111.github.io/post/project-7/>

#### LasVegas - Tableau Dashboard

- **Objective:** To create interactive dashboard for a client. Dataset: The 'LasVegas' dataset is a Multivariate dataset that provides details on 504 TripAdvisor reviews of the 21 hotels located in the Strip, Las Vegas.

- **Audience:** User of the dashboard is a manager at Wyndham Grand Desert (3-Star hotel) who is keen to perform SWOT analysis based on travellers' feedback (review score).  
**GitHub:** <https://vwaghamare111.github.io/dashboards/dashboard-1/>

## MANAGERIAL WORK EXPERIENCE

<b>State Street Syntel (JV Syntel and State Street, Australia)</b>	<b>Pune, India</b>
Deputy Manager (Operations)	Apr 2014 – Sep 2016
Team Leader (Operations)	Jun 2011 – Mar 2014
<b>SumaSoft Private Limited</b>	<b>Pune, India</b>
Assistant Manager (Operations)	Nov 2008 – Jan 2011
Team Leader (Operations)	Apr 2004 - Oct 2008

## EDUCATION

<b>Deakin University, Melbourne, Australia</b> <b>Master of Data Science</b>	<b>Feb 2019 – Oct 2020</b>
<ul style="list-style-type: none"> <li>• Recipient of Deakin India Merit Scholarship, 20% tuition, 2019 – current.</li> <li>• Achieved high distinction average with WAM: 80%.</li> </ul>	
<b>Gokhale Institute of Politics and Economics, Pune India</b> <b>Master of Science in Financial Economics</b>	<b>Jun 2016 – Jun 2018</b>
<ul style="list-style-type: none"> <li>• Acquired CGPA of 8.00 on a 10 point grading scale.</li> <li>• Researched on comparison between below topics using univariate stock indices time-series: <ul style="list-style-type: none"> <li>○ Efficient Market Hypothesis (EMH) and Fractal Market Hypothesis (FMH)</li> <li>○ Econometrics and Machine Learning algorithms</li> </ul> </li> </ul>	
<b>Pune University, Pune India</b> <b>Post Graduate Diploma in Business Management (Finance Specialization, Part time)</b>	<b>Jul 2010 – Jul 2012</b>
<ul style="list-style-type: none"> <li>• Scored 67% overall.</li> <li>• Project of investment portfolio direction using Altman Z score.</li> </ul>	

## TECHNICAL SKILLS

• Python	• ETL / ELT pipeline	• R Statistical Software	• Tableau
• Power BI	• Data cleansing	• VBA for excel	• Deep Learning
• Machine Learning	• Data wrangling	• Financial modeling	• Py Spark SQL
• Flask	• Object oriented programming	• Econometric models	• Statistical models

## SOFT AND TRANSFERABLE SKILLS

• Effective communication	• Adaptability	• Storytelling	• Documentation
• Intellectual curiosity	• Critical thinking	• Problem solving	• Team player
• Business acumen	• Product understanding		

## PACKAGES

**Python** - scikit-learn, sklearn, keras, tensorflow, statsmodel, scipy, nltk, etc.

**R Software** - ggplot, igraph, ggm, Rgraphviz, RBGL, gRbase, gRain, bnlearn, dplyr, detrendeR, forecast, tseries, fBasics etc.