# Dhinesh Raja

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# **Professional Summary**

- Around 1.5+ years of strong experience in software development and analytics using Machine Learning,
  Bigdata, Apache Spark and Java and Python Technologies.
- Solid Mathematics, Finance, Probability and Statistics foundation and broad practical statistical techniques cultivated through various industry work and academic programs.
- Involves in the Software Development Life Cycle(SDLC) phase which include Analysis, Design,
  Implementation, Testing and Maintenance.
- Good technical, administrative, & mentoring knowledge in Machine Learning, Deep Learning and various Machine Learning libraries and algorithms.
- Hands on experience with tools like Tensorflow, Spark Machine Learning, Scikit-Learn, Numpy,
  Pandas, python, Java, Keras.
- Experience in **Transfer Learning** technique to train the neural networks.
- Experience in machine learning algorithm techniques like **Supervised** and **Unsupervised** learning and expertise in algorithms like Linear Regression, Logistic Regression, K-Means, Clustering, Support vector machines, Decision trees, Random Forest, **neural networks**.
- Depth knowledge on deep neural network architectures like Lenet, Vgg-16, Vgg-19, Resnet, Inception, etc.
- Experience in computer vision problem like image classification, Object detection using model like
  YOLO, Inception, ResNet, LeNet etc.
- Experience in Azure cloud infrastructure like Azure Machine Learning.
- Experience in version control systems like Github and BitBucket.
- Creatively communicate and present models to business customers and executives, utilizing a variety of format and visualization methodologies.

#### **Technical Skills**

- Programming Language: Java, Python
- Machine Learning Algorithms: Linear Regression, Logistic Regression, Support vector Machine, K-Means, Clustering, Decision trees, Neural networks, Deep neural networks, Transfer Learning, Convolutional neural networks.
- Neural network Architecture: LeNet, Vgg-16, Vgg-19, Resnet, Inception Net, YOLO.
- Distributed Programming: Spark Core, Spark Machine Learning
- Machine Learning Library: Tensorflow, Keras, Scikit-Learn, Azure Machine Learning.
- Scientific Library : Numpy, Pandas, scipy
- Visualization Library: Matplotlib
- Cloud (Azure): Azure Machine Learning, Windows, Linux VM Creation.

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# **Experience**

# Big Data and Machine Learning Engineer

11/2016 to Present

### Bizruntime IT Service Pvt. Ltd.

Bengaluru, India

Environment: Python, Tensorflow, Keras, Scikit-Learn, Azure Machine Learning.

### Responsibilities:

- Created different machine learning models to find out which will be suitable for the business problems.
- Labeled the datasets to feed and train the created neural networks.
- Performed hands-on data manipulation, transformation, hypothesis testing and predictive modeling.
- Collaborated on insight with other Data Scientists, Business Analysts, and Partners.
- Evaluate, refine and continuously improve the efficiency and accuracy of existing Models.

### Associate Portfolio Analyst

09/2015 to 02/2016

#### State Street Global Advisors

Bengaluru, India

## Responsibilities:

- Analysis of the return on investment of the client's Mutual Fund portfolio.
- Calculating the monthly return and risk involved in the investment of the client's portfolio in different market.
- Generating the risk and return reports for client's investment made on each month.

### Certificates

Oracle Certified Java Professional

DeepLearning with Tensorflow- IBM

## **Projects**

### Object detection Application

#### Bizruntime IT Service Pvt. Ltd.

**Description.** This project is about creating an application to detect the object and the exact location of the object in the 2-D CAD images.

#### Modules

#### Dataset Creation:

This module involves creation of the dataset to feed the deep neural network and train the neural network to detect the custom object.

I have used the LabelImg library to label the training and testing dataset which will be used to train the neural network model created.

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#### Model creation:

This module involves creating the deep neural network model which will be suitable for the problem.

I have used the concept of Transfer Learning to create the custom model for this application. I have used the Tensorflow Object detection Api.

### Training and Testing:

Trained the network with our custom datasets, tested and optimized it.

I tuned the hyperParameters like number of epoch, learning rate to optimize the model to achieve maximum efficiency.

### Cryptocurrency Arbitrage Trade Application

#### Bizruntime IT Service Pvt. Ltd.

**Description:** This project is about designing and developing an application that doing the arbitrage trade of the cryptocurrency among different exchanges around the world.

### Modules and My Role

- **Data Injection:** My role in this module involves creating a Java application to connect to different Crypto Currency Exchanges to get Order Book, Ticker and Trade Book data through Web Socket and REST Full API and creation of topics in Kafka cluster for each cryptocurrency pair in Spark HdInsight Azure Cloud.
- **Data Manipulation:** My role in this module involves creating a Spark application and spark jobs which performs the business logic like processing the raw data which is injected to the kafka topics. This data manipulation and processing is done through spark streaming API and involves submitting jobs to Spark Cluster in Azure to take data from Kafka topic and push the clean processed data to Elastic Search index.
- **Data Visualization:** The clean data which contains the detailed information of BestBid, BestAsk and Midpoint of different currencies from different exchanges all over the world is visualized using the Kibana visualization tool in a single dashboard which helps in making arbitrage trade manually by us.
- Coin Movement: This module involves creating an application to estimate the time taken to move the coin from one exchange to another exchange which will be used to decide from which exchange to which exchange we could move the coin quickly to achieve profit in trade.
- **Analytic application:** In this we have written a Machine Learning API which will automate the trade system that is to place order, cancel order etc. My role is to tune the hyperparameters in the model to perform better.

# Education

- Master of Business Administration in Finance, Statistics from International Institute of Business Studies, University of Mysore.
- Bachelor of Engineering in Electronics and communication from Kings Engineering College, Anna University.