**Name: Balakrishna N**

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Employer: BEBOIN INFO PVT LTD FOR 4.7 YEARS (MAR-2017 TO TILL DATE)

ADIWEBTECH SOLUTIONS PVT LTD FOR 4.8 YEARS (JUN-2012 TO FEB-2017)

Profile Summary:

* 9+ years work experience.
* Working with ETL process with Talend tool.
* Working with Exploratory Data Analysis, Data Pre-processing, Feature selection, Statistical model building, Predictive Analytics, Parameter tuning, Model performance evaluation and selection.
* Working with Statistical modeling: Linear regression and Logistic Regression.
* Working with Machine learning algorithms: Supervised and unsupervised: SVM, KNN, Decision Tree, Random forest, Adaboost, Gradient boost, Xgboost, ANN, K-means, Hierarchical clustering, DB Scan.
* Working with MLflow, Scikit-learn, MLlib, Pandas, Numpy, Matplotlib, Seaborn, Plotly and cufflinks.
* Working with SQL(MySQL & Sql server).
* Working with Deployment to cloud platforms (AWS Elastic beanstalk) using Flask framework.
* Reporting, Dashboard and Story preparation by using Tableau and PowerBI.
* Summary statistics that includes Count, Sum, Minimum, Maximum, Percentile, Mean, Median, Mode, Standard deviation, Standard error, Variance and Skewness .
* Z-test, t-test, Chi-square test, ANOVA test and Confidence interval.
* Analytical results interpretation as per regulatory bodies like United states pharmacopoeia, European pharmacopoeia, British pharmacopoeia and Indian pharmacopoeia and respective regulatory agencies.
* Knowledge on Deep learning algorithms, Natural Language Processing and AZURE ML.

**TECHNICAL SKILLS**

* Languages: Python, Pyspark, R
* Database : MySql & Sql server
* IDES : RapidMiner, Databricks, Spider, Pycharm, Jupyter , R-Studio, MS-Excel
* Frame work: Flask
* ETL Tool: Talend
* Visualization Tool: Tableau & PowerBI
* Deployment Tool: Docker & AWS Elastic BeanStalk
* Git, GitHub, CI, CD and jenkins
* Cloud: AWS DevOps (AWS codecommit, AWS codebuild, AWcodedeploy, and AWS codepipeline)

Project No. 01

# Title: Early Detection of Diabetes - Machine Learning Algorithms

Client: AstraZeneca

Project description:

Diabetes is a common chronic disease and poses a great threat to human health. Diabetes can lead to chronic damage and dysfunction of various tissues, especially eyes, kidneys, heart, blood vessels and nerves. The typical clinical symptoms are increased thirst and frequent urination. The earlier diagnosis is obtained, the much easier we can control it. Machine learning can help people make a preliminary judgment about diabetes mellitus according to their daily physical examination data. Machine learning algorithms are used to predict diabetes, such as KNN, support vector machine (SVM), decision tree (DT), logistic regression, Random forest, adaboost, gradient boosting and Xgboost. Evaluated models based on evaluation metrics.

Project No. 02

# Title: Early Detection of Cervical and Breast Cancer - Machine Learning Algorithms

Client: AstraZeneca

Project description:

Cervical cancer is one of the diseases which are most prevalent in females. This is seen when some changes occur in a woman's cervix. To further complicate the issue these cancer cells can spread to other organs such as the liver, bladder, rectum, and even lungs. Earlier detection, screening, and careful precautions have seen higher rates of recovery. Breast cancer is a prevalent cause of death, and it is the only type of cancer that is widespread among women worldwide. Correct and early diagnosis is an extremely important step in rehabilitation and treatment. Machine learning can help people make a preliminary judgment about Cervical and Breast Cancer. Machine learning algorithms are used to predict diabetes, such as KNN, support vector machine (SVM), decision tree (DT), logistic regression, Random forest, adaboost, gradient boosting and Xgboost. Evaluated models based on evaluation metrics.

Project No. 03

# Title: Early Detection of Hypertension - Machine Learning Algorithms

Client: AstraZeneca

Project description:

Hypertension remains the largest modifiable cause of mortality worldwide. Hypertension requires transformative solutions that can help reduce the global burden of the disease. It is a common health condition that has become an issue in the modern world, it is part of the metabolic syndrome and a multifactorial condition in which an individual is diagnosed with systolic blood pressure ≥140 mmHg and/ or a diastolic pressure ≥90 mmHg. Its exact causes are unknown but genetic mutation, increased sodium intake, decreased physical activity, and obesity contribute to its progression. In some cases, hypertension acts as a “silent killer;” only noticed when it reaches a dangerous level. Machine learning can help people make a preliminary judgment about Hypertension. Machine learning algorithms are used to predict diabetes, such as KNN, support vector machine (SVM), decision tree (DT), logistic regression, Random forest, adaboost, gradient boosting and Xgboost. Evaluated models based on evaluation metrics.

Project No. 04

Title: Development of analytical methods for different Dosage forms

Client: MSN labs

Project description:

Client providing data related to all development trails, here client objective is to predict the best trails for the development of analytical methods in order to reduce time and consumables. **The various factors like pH of Mobile phase, Column temperature, Sample cooler temperature, Column dimensions(length, width, particle size and Void volume), Injection Volume, Needle wash, Seal wash, flow rate and wavelength, how these factors plays major role in developing analytical Assay, Related substances, Dissolution, Chiral and Residue methods.** Data understanding, translating to machine learning problems, solved with Unsupervised learning technique K-means clustering and supervised Ml algorithms applied for this project were Decision tree, Random forest, SVM, adaboost, gradient boosting and Xgboost. Evaluated models based on evaluation metrics.

Project No.5

Title: Formulation Development of different ANDA Dosage forms.

Client: MSN labs

Project description:

### **ANDA** Drugs development pipelines are long, complex and depend on numerous factors. Huge number of development trails are performed to get a stable ANDA formulation. To develop different dosage forms like Tablets, Capsules, Injections, Aerosols, Dry powder, Inhaler, Emulsions, Inserts, Foams, Gels, Granules, Medicated gums, Implants, Liquids, Ointments, Pastes, Pellets, Pills and Plasters. The affect of different excipients like Diluents, Binders, Compression aids, Granulating agents, Disintegrants, Glidants, Lubricants, Coloring agents, Antibiotics, Formaldehyde, Aluminium salts, Stabilizers, Thimerosal, Diluents, **how these factors plays major role in developing** different ANDA Dosage forms. Data understanding, translating to machine learning problems, solved with Unsupervised learning technique K-means clustering and supervised Ml algorithms applied for this project were Random forest, SVM, adaboost, gradient boosting and Xgboost. Evaluated models based on evaluation metrics.

Strengths:

Time management

Problem solving skills

Goal-Oriented

**Professional Achievements**

Recognized by the leadership for performing ‘Above and Beyond’ the expectations on the key project.

Recognized by the Vice-President for being the innovator and problem solver to support teams for valuable projects of the firm.

Academic Profile:

Master of Pharmacy (M. Pharmacy), specialization in Advanced Pharmaceutical Analysis and Quality Assurance from JNTU University in 2012.

**Declaration:**

I hereby declare that all information given above is correct to the best of my knowledge and belief.

Date: 07/09/2021

Place: Hyderabad (N. Balakrishna)