

Master of Technology (M.Tech.)

OBJECTIVE

A Data Science practitioner with projects and mentoring experience. Looking forward to help decision makers to solve business problems using real world data.

CAREER HIGHLIGHTS

**Rein Labs
(Contexio)
&
RRCAT Indore**

- Research Analyst for an E-commerce startup Tatacliq (June 18 – Jan 19)
- Project work on design and development of an electromagnetic filter with the help of Comsol Multiphysics 5.0. (July 17 – June 18)

ACADEMIC PROFILE

Year	Degree	Institute	Performance
2018	M. TECH (Electronics and Tele-Communication)	MPSTME, NMIMS University, Mumbai	CGPA = 3.86/4 (4 semesters)
2016	B.E (Electronics and Communications)	G.E.C. Bhavnagar	CPI=7.72 (8 semesters)
2012	H.S.C (XII)	Sardar Patel Educational Institute Bhavnagar	61.33 %
2010	S.S.C (X)	St. Mary's English School Bhavnagar	76.15 %

PROJECTS UNDERTAKEN

**Data Science
Projects**

Project 1

Title: Prediction of weight of people based on their heights.

1. Data pre-processing: Analysis of heights and weights data based on its datatypes and the kind values it holds.
2. Stratified splitting of data into training and testing: Creating 70% of data sets for training and 30% of data sets for testing.
3. Applying algorithm: Linear Regression and applied using Python to predict the height.
4. Evaluation: Finding RMSE using above algorithms.
5. Result and Conclusion: 9.31 RMSE is achieved by using Linear Regression.

Project 2

Title: Prediction of Class of Flower based on its data attributes.

1. Data pre-processing/Exploration: Analyzed the Iris data by exploring the data and understanding its type.
2. Stratified splitting of data into training and testing: Creating 70% of data sets for training and 30% of data sets for testing.
3. Applying algorithm: Logistic Regression algorithm, Naïve Bayes, Decision Tree and Random Forest in Python, used to predict the log odds of the multiclass.
4. Evaluation: Finding accuracy of the predicted model.
5. Result and Conclusion: 93.33 % accuracy in testing data using Naïve Bayes algorithm.

Project 3

Title: Prediction of quality of white wine based on physiochemical tests like fixed acidity, volatile acidity, citric acid, residual sugar, chlorides and others.

1. Data pre-processing: Data analysis using different attributes.
2. Stratified splitting of data into training and testing: Creating 70% of data sets for training and 30% of data sets for testing.
3. Applying algorithm: Logistic Regression, Decision Tree Classifier, Naïve Bays, Random Forest algorithms are used with Python to predict the wine quality.
4. Evaluation: Finding accuracies using above algorithms.
5. Result and Conclusion: 66.80 % maximum accuracy is achieved by using Random Forest algorithm (No. of Trees=500).

Project 4

Title: Prediction of sales of Bigmart Store based on item weight, MRP, Size, Type.

1. Data pre-processing: Data exploration using different attributes.
2. Stratified splitting of data into training and testing: Creating 70% of data sets for training and 30% of data sets for testing.
3. Applying algorithm: Linear Regression and Random Forest algorithms are used with Python to predict the sales.
4. Evaluation: Finding RMSE using above algorithms.
5. Result and Conclusion: 51.32 RMSE is achieved by using Random Forest algorithm (No. of Trees=50).

Project 5

Title: To classify if the person is Diabetic based on different attributes.

1. Data pre-processing: Data exploration using different attributes.
2. Stratified splitting of data into training and testing: Creating 70% of data sets for training and 30% of data sets for testing.
3. Applying algorithm: Logistic Regression, Decision Tree Classifier, Naïve Bays, Random Forest algorithms are used with Python to predict the diabetic person.
6. Evaluation: Finding accuracies using above algorithms.
7. Result and Conclusion: 80 % maximum accuracy is achieved by using Random Forest algorithm (No. of Trees=100).

Master's Project Title: 3D design and simulation of an electromagnetic dipole

Description: Design and development of electromagnetic filters used in ion sources for reducing the plasma losses with the help of Comsol Multiphysics 5.0. Three different designs were developed such a Notch Shaped, Toroidal and Circular Shaped. The Notch Shaped design was more efficient in the confinement of plasma in the ion source developed at RRCAT, Indore.

Graduation Project Title: GSM and GPS based vehicle tracking

Description: We developed a prototype of the vehicle tracking system using GSM and GPS modules which was able to give the location on the basis of 3 co-ordinates along with accidental alerts. This project was implemented with the help of Atmega 16 microcontroller.

Academic Projects

TECHNICAL SKILLS

- **Languages:** Python
- **Data Science Skills:** Data processing in Python, Application of different Machine Learning models for predictive data modeling such as Linear Regression, Logistic Regression, Decision Tree, Random Forest, Naïve Bayes, KNN and Clustering as per the use case and requirements.
- **Platforms & Softwares:** Windows, Microsoft Office, Pycharm, Comsol Multiphysics, Optisystem
- **Relevant Courses:** Data Science and Machine Learning, Hardware and Networking, PLC Basics.

TECHNICAL PUBLICATIONS

- A research paper based on “3D-Design simulation and development of electromagnetic filter magnet for H- ion source” at In-PAC 2018, RRCAT Indore.
- Presented a research poster based on the research work carried out on development of different geometries of an electromagnetic filter at Anugoonj-2018, RRCAT Indore.

SCHOLASTIC ACHIEVEMENTS

- Qualified GATE 2016
- Completed 8 levels of ALOHA arithmetic at ALOHA Bhavnagar.

EXTRA-CURRICULAR ACTIVITIES

- Volunteer in Jain Social Group (JSG) –West
- Poster presentation in Anugoonj-2018 at RRCAT, Indore
- Hobbies: Travelling, Reading and Listening Music

PERSONAL INFORMATION

- Address: **Aadinath hostel, Sector 20, Belapur CBD,
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