DHANALAKSHMI SRINIVASAN COLLEGE OF ENGINEERING & TECHNOLOGY

DATA SCIENCE AND DATA VISUALIZATION TRAINING REPORT

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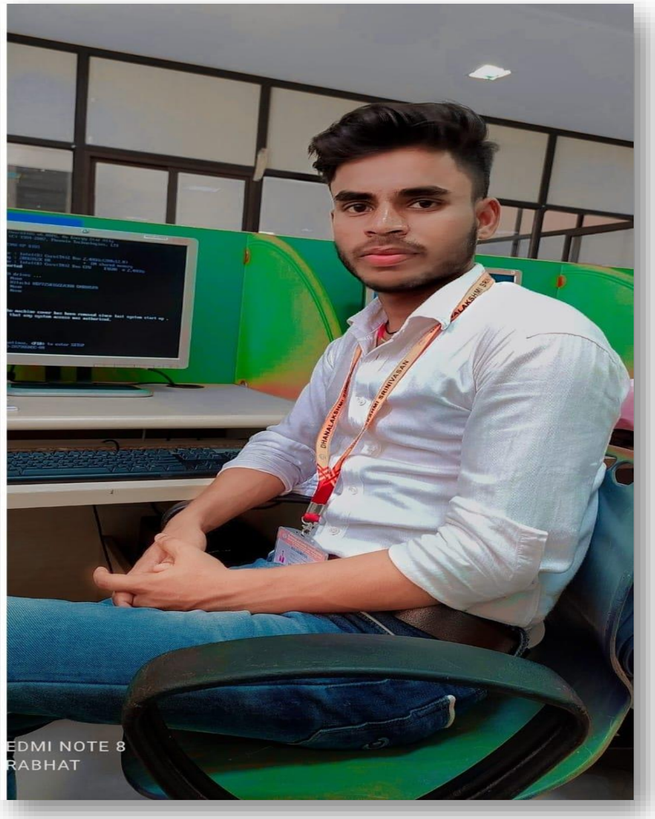

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INTRODUCTION

THIS REPORT PROVIDES AN OVERVIEW OF THE TRAINING CONDUCTED IN MODULES 5 AND 6, FOCUSING ON PRESENTING DATA IN COGNOS ANALYTICS AND PYTHON FOR DATA SCIENCE. THE TRAINING AIMED TO EQUIP PARTICIPANTS WITH SKILLS IN VISUALIZING AND ANALYZING DATA USING BOTH GRAPHICAL TOOLS AND PROGRAMMING LANGUAGES.

Module 5: Present Data in Cognos Analytics

- **Key Learnings:**

- **Data Connection and Preparation: Participants learned to connect Cognos Analytics to various data sources, including databases and spreadsheets. Techniques for data cleaning and preparation were explored.**
- **Visualizations and Dashboards: The module covered the creation of interactive visualizations such as charts and graphs. Participants practiced combining these visualizations into interactive dashboards with filtering and drill-down capabilities.**
- **Data Exploration and Collaboration: Participants acquired skills in exploring data visually, employing features like filtering. Collaboration aspects were emphasized, including sharing reports and dashboards securely.**

MODULE 6: PYTHON FOR DATA SCIENCE

KEY LEARNINGS

Key Learnings:

- Data Loading and Preparation: Participants were introduced to loading data into Python from various sources such as CSV files. They learned techniques for data preprocessing, including handling missing values and outliers. • Data Analysis and Visualization: The module covered exploratory data analysis

(EDA) using Pandas. Participants practiced creating visualizations using libraries like Matplotlib and Seaborn to represent data insights effectively.

- Machine Learning Fundamentals (Possibly): For participants engaged in machine learning, basics of building machine learning models using ScikitLearn were introduced. Training and evaluation of models for tasks like classification and regression were explored.

CONCLUSION

The training in Modules 5 and 6 provided participants with a comprehensive understanding of data visualization using IBM Cognos Analytics and data analysis using Python. Participants gained practical skills in connecting to data sources, creating interactive visualizations, and performing data analysis tasks. Additionally, those engaged in machine learning delved into fundamental concepts and techniques.

RECOMMENDATIONS

- Practice and Hands-On Experience: Encourage participants to practice creating visualizations and performing analyses independently to reinforce their skills.
- Continued Learning: Suggest resources and materials for participants interested in diving deeper into advanced topics such as advanced machine learning algorithms or specialized data visualization techniques.

ACKNOWLEDGMENTS

We extend our appreciation to the trainers for their expertise and dedication during Modules 5 and 6. Special thanks to all

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