**Course info:** **ADTA 5130 Section(s) 003,013 and IPAC 4130 Section(s) 003 (Fall 2023 1)**

**Team Members:** Maneesh Gembali - (maneeshgembali@my.unt.edu)

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**Dataset Chosen:** hotel\_bookings.csv

**Project Proposal:** Understanding consumer behavior, improving pricing tactics, and raising overall visitor happiness are the goals.

**Introduction:**

The Hotel Bookings Project's objective is to investigate booking patterns over a span of years at a significant hotel chain. The objectives are to comprehend client behavior, enhance pricing strategies, and increase general visitor satisfaction. The research will employ statistical methods like Analysis of Variance (ANOVA) and Regression models to draw meaningful conclusions from the data.

**Team Introduction:**

We are a team of 5 people (Group – 15) and we are under ADTA 5130 Section(s) 003,013 and IPAC 4130 Section(s) 003 (Fall 2023 1)

1. Maneesh Gembali
2. Venkat Laxman Pavan Athi
3. Renusree Nagirimadugu
4. Chandana Adla
5. Deepak Rambarki

Our team is made up of individuals with varied personal and professional histories. Below is a list of our previous experiences and skills.

1. **Maneesh** has worked for one and half year as a data analyst in Ganit Business Solutions pvt ltd. He is experienced in leverage data-driven insights to optimize business processes, enhance decision making by applying advances analytics techniques, and to get the valuable information from the complex datasets and provide certain recommendations to improve KPI’s. And his main roles is to implement the different machine learning models such as SVM, Linear Regression, Logistic Regression, Decision Tree, Naive Bayes Classifiers, Random forest. And he worked in data engineering project where his part was in ETL, Bankend queries and dashboarding, pipeline building , Data Automation using AWS services such as Quick sight, Redshift, Kinesis, Lambda and he was trained on Python, SQL, PySpark, R, MS Excel.
2. **Venkat** has 5+ years of work experience as Tableau Developer in Capgemini. His main roles are to create, design and develop the tableau dashboards according to clients’ requirements. He designed various graphs and cross tables using the data provided by clients and turn that raw data into actionable insights which helps client to take valuable decisions. As he is a senior consultant, he must manage the customer relation and project team management.
3. **Nagirimadugu Renusree** has work 4+ years of experiences working with different domains like API testing and Salesforce on sales cloud. She has knowledge in Apex coding , MS excel, HTML and basics in python. In her experiences, she used the database which provided by sales force and that is quite different from the other databases. Analytics’ in my personal and professional life help with debugging to solve problems.
4. **Chandana** She had graduated my Bachelor of Technology in the year 2022 in a stream of Electronics and communication engineering and done internship on Designing of LED Bulbusing embedded system also few projects in my bachelors using Arduino software in designing smart appliances & artificial machine moreover I had completed course certification in python, MS-Excel and database management. Since she is a fresher, She is having the basic knowledge on SQL, MS excel, python.
5. **Deepak** has an experience of 1 and half year as an Executive Engineer in Straive and he has allocated to multiple projects such as ‘Analysis of client data’ and ‘content creation’ where his roles and responsibilities are to collecting data and performing data analysis to give business insights, he worked closely with clients to understand their requirements and customize the files as per their needs, I will also take part in content creations by using the tools like LaTeX coding, Excel and verify platform to provide enhanced solutions for clients. And he did the Data Exploration and cleansing in multiple projects and provides Model validation and he worked in tableau for clear and intuitive data representation.

Under the direction of distinguished academics and teaching assistants, we as a team are and will work cooperatively to complete the project's intended aim in the suggested timeframe. We're hoping to be able to offer the results with the highest degree of accuracy and the fewest possible errors.

**Scope of Work:**

This project will include the following stages:

1. Complete Data Cleaning and Preparation.
2. Conduct ANOVA analyses
3. Develop Regression Models.
4. Interpretation and Documentation.
5. Finalize Report and Presentation

**Timeline:**

This project is estimated to be 5 weeks.

**Week-1**: Finish data preparation and cleaning. A portion of the dataset is examined by each team member to ensure accuracy and consistency.

**Week-2**: Analyze data using ANOVA. Team members will work on channel-based and seasonal ANOVAs, respectively, making sure that all presumptions are met.

**Week-3**: Construct regression models. the creation of models for lead time regression and cancellations/no-shows. Meetings held on a regular basis to validate and improve models.

**Week-4**: Documentation and interpretation. To interpret findings, make inferences, and record conclusions, the entire team works together. presenting of results through visualization.

**Week-5**: Finish the presentation and report. modifying, finishing, and proofreading the report. making an interesting presentation for stakeholders that summarizes the results.