

# **Internship Progress Report (Week 1 & Week 2)**

## **Project Title: Optimizing IT Support Team Performance Using Analytics (Supportlytics)**

Role: Data Visualization Intern – Infosys Springboard

### **Project Overview**

The Supportlytics project focuses on analyzing IT support ticket data to improve support efficiency and performance. The first two weeks were dedicated to data preparation and feature engineering, forming a strong foundation for further analysis and visualization.

### **Week 1: Data Understanding & Cleaning**

During Week 1, the dataset was loaded and explored to understand its structure, data types, and quality. Missing values were handled, text fields were standardized, language consistency was ensured, and redundant columns were removed. A unique ID column was added and tag columns were renamed into business-friendly names for better interpretability.

### **Week 2: Feature Engineering & Validation**

In Week 2, advanced feature engineering was performed. New analytical features such as ticket length, tag count, urgency indicators, performance-related flags, and issue-type indicators were created. Feature validation checks ensured data consistency, no missing values, and logical correctness. Helper columns were removed, and the final dataset was prepared for analysis.

### **Tools & Technologies Used**

Python, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, Google Colab.

### **Outcome of Weeks 1 & 2**

At the end of Week 2, a clean, consistent, and feature-engineered dataset was successfully prepared. The dataset is now fully ready for exploratory data analysis, clustering, and dashboard development.