**Case Study**

**Hotel Tariff Comparison across Bangalore and Mumbai**

**An Example of Travel Company: American Express Global Travel:**

American Express Global Business Travel (GBT), a global leader in business travel and meetings management committed to helping business succeed through cost-effective program management, world-class customer service, and enhanced traveller productivity support worldwide.

Data Analytics Centre of Excellence brings the talent, tools, and consulting acumen needed to help manage companies’ T&E spend and maximize the return on their investments in employee travel and other areas of indirect cost. Specialized expertise includes: T&E policy, sourcing and supplier management, change management and compliance management, business intelligence, on-going travel category management, payment and expense reimbursement management, and related business process best practices.

Website: <https://www.amexglobalbusinesstravel.com/>

**Case Problem**

XYZ travel Company wanted to compare tariffs of a typical three star across two locations in India, Bangalore and Mumbai. How do we infer which location is more expensive?

**Data:**

The XYZ gets a lot of data from their clients as they travel to various destinations. The list of variables for analysis can run into hundreds. A few of them are:

|  |  |  |
| --- | --- | --- |
| Date of Travel | Employee Name | Hotel Class (Star Category) |
| Time of Travel | Employee ID | Room Category (Executive, Deluxe, Business, Suite etc.) |
| DEPARTMENT | Class of Service Compliance | Room Tariff |
| Origin City | ROUTE | Room Discount |
| Destination City | Ticket Count | Complimentary Breakfast/Benefits |
| Domestic/International | Ticket Amount | Lunch |
| Carrier | Flight Miles | Days of Stay |
| Class Type | Flight Time | Airport Pickup/Drop |
| Vendor Payment details | Hotel Booked | Type of Cab |
| Tax Management | Mode of Payment | Total Expense for the trip |

However, we consider here a subset of that big data here. The XYZ company obtained information from their hotel partners regarding their Average tariff earned per room in a year from three star hotels across Mumbai and Bangalore for Deluxe rooms. The name of the data file is **Case Study Hotel Tariff Comparison.csv**

**Questions:**

1. Hypothesis Testing: Test whether Mumbai is more expensive than Bangalore.