

Ayushman Bharat Yojana

- **Project Title** Using AI to develop robust monitoring and fraud detection mechanisms.
- **Team Details:** Mr. Satendra, Mr. Naveen, Mr. Laxminarayan, Mr. Deepak, Mr. Shailendra, Mr. Devendra, Mr. Bhupendra

- **Introduction:**

Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana endeavors to offer health coverage of Rs. 5,00,000 to more than 10 crore beneficiary families, which is more than 40 percent of the country's population. This unprecedented effort of the Government of India is likely to have a significant impact on the poor and vulnerable population's access to secondary and tertiary hospital care. Global experience shows that integrity violations in health insurance programs are high. Fraud in such programs results in financial losses and has a much greater impact on people's health. The ultimate responsibility to effectively prevent, detect and deter fraud lies with the State Health Agencies (SHA). Strong anti-fraud efforts are important not only to reduce the adverse impact on scheme finances and for safeguarding beneficiary health but also to mitigate any reputational risk faced by the SHA, state, and the scheme resulting from fraud.

- **Project Objectives:**

- Key recommendations to strengthen Ayushman Bharat
- How to stop fraud cases in hospitals.

- **Role of Artificial Intelligence**

AI increases the scope of activities that can be done by machines such as natural language processing, chatbots, computer vision, or machine learning. For example, machine learning can be deployed to understand the overwhelming healthcare data while reducing the decision processing time.

- **Role of Python and Machine Learning:**

Machine learning requires a good amount of data to identify the underlying pattern. In healthcare where an enormous amount of data is generated and readily available, Machine learning is a powerful tool for prognosis and can provide a tremendous boost to this branch of healthcare by using many different types of medical data.

We are also Using Python and its libraries

- NumPy,
- Pandas,
- Matplotlib,
- Scikit-Learn.

2. DATA SET DESCRIPTION



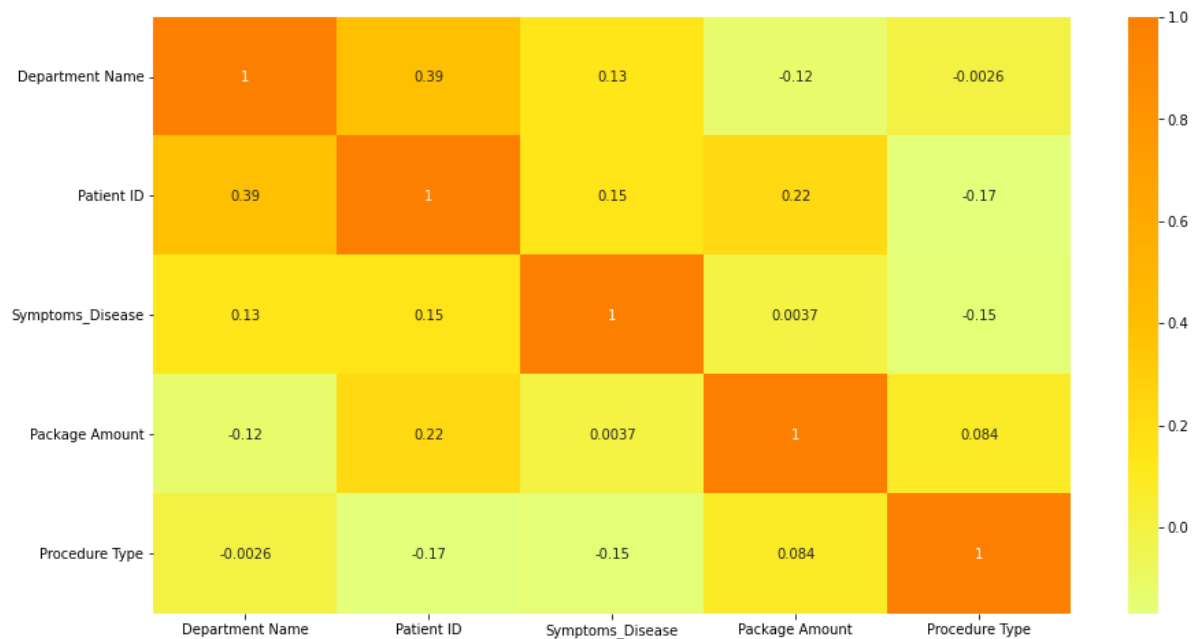
- For Report
There are 1416 rows and 10 columns in this dataset with features:
We are using 5 Columns and 1416 rows

['Department Name', 'Patient ID', 'Symptoms_Disease', 'Package Amount', 'Procedure Type']

+ Code + Text

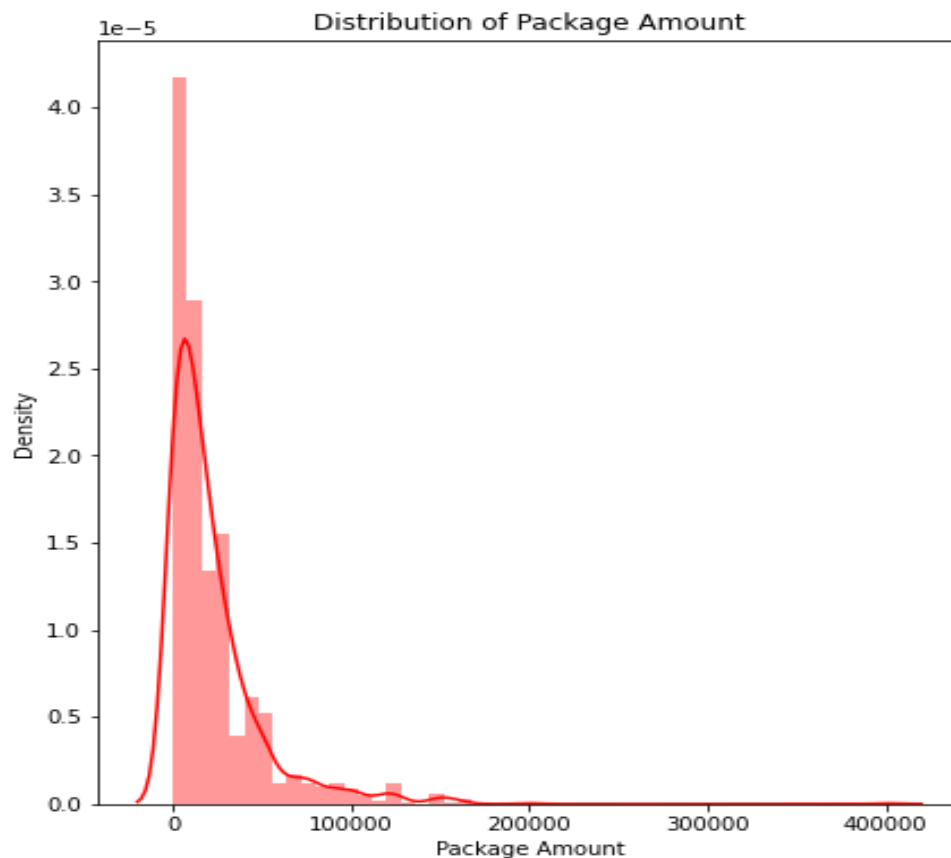
data_1.head()

	Department Name	Patient ID	Symptoms_Disease	Package Amount	Procedure Type
0	General Medicine	M100001	Acute gastroenteritis with moderate dehydration	0	Trust
1	General Medicine	M100002	Recurrent vomiting with dehydration	0	Trust
2	General Medicine	M100003	Dysentery	0	Trust
3	General Medicine	M100004	Renal colic	0	Trust
4	General Medicine	M100005	Acute bronchitis	0	Trust
5	General Medicine	M100006	Pneumothroax	0	Trust
6	General Medicine	M100007	Accelerated hypertension	0	Trust
7	General Medicine	M100008	Congestive heart failure	0	Trust
8	General Medicine	M100009	Severe anemia	0	Trust
9	General Medicine	M100010	Diabetic ketoacidosis	0	Trust
10	General Medicine	M100011	Acute febrile illness	0	Trust
11	General Medicine	M100012	Acutre excaberation of COPD	0	Trust
12	General Medicine	M100013	UTI	0	Trust
13	General Medicine	M100014	Malaria	0	Trust
14	General Medicine	M100015	Dengue fever	0	Trust
15	General Medicine	M100016	Chikungunya fever	0	Trust
16	General Medicine	M100017	Leptospirosis	0	Trust
17	General Medicine	M100018	Enteric fever	0	Trust
18	General Medicine	M100019	Pneumonia	0	Trust
19	General Medicine	M100020	Acute excaberation of ILD	0	Trust



• Importance of Artificial Intelligence in healthcare

Ayushman Bharat is currently facing a lot of strategic management challenges like data handling of all the patients and citizens enrolled in the scheme, minimizing the cost of service, and improving data security and quality of care. In order to enhance the service, the Government of India has deployed AI, machine learning, and deep learning.



Key recommendations to strengthen Ayushman Bharat

1. Drive citizen/patient engagement.
 2. Provisioning of standardized care.
 3. Devising a National Pricing Index System.
 4. Ayushman Bharat learning academy and e-learning system.
 5. Mandatory healthcare coverage for all.
 6. Rethinking 'private' as partners.
 7. Shaping the healthcare marketplace.
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A Histogram of Department Name from this Data Set

