



Certified

AI & ML BlackBelt+

Program

Your gateway to a magnificent future!

Projects

Projects from different industries

- Recommendation systems
 - Movie recommender system
 - Article recommender system
 - Online book recommender system
- Retail
 - Market basket analysis for supermarket
 - Big mart sales predictions
 - Using time series models for sales forecasting
 - Association rule mining for supermarket
 - Demand forecast for food items
- Spam filtering
 - Hate speech classification
 - SMS spam classification

Projects from different industries

- Finance
 - Summarization of customer reviews
 - Loan eligibility prediction
 - Customer churn prediction
 - Bank with high credit charge off
- Self driving vehicles
 - Classify emergency vehicles from non emergency vehicles
 - Lane segmentation for self driving cars
- Medical & Healthcare
 - Malaria detection from blood cell images
 - Cardiac arrest predictor
 - Blood cell detection
 - Gender classification

Projects from different industries

- Smart tech
 - Identifying faces from images
 - Human pose estimation
 - Build your first chatbot
 - Speed command identification
- Social media and search engine
 - Social media information extractor
 - Auto correct
 - Identifying sentiments
 - Photo gallery organization using auto encoders
 - Next word recommender system
 - Twitter sentiment analysis
 - Auto completion system

Projects from different industries

- Sports
 - Categorization of sports articles
 - Descriptive analytics of real life FIFA 19 players
 - Cricket shot detection
- Transportation
 - NYC taxi trip prediction
 - Predict survivors from titanic
 - Deploying urban sound classification using flask

Apart from this the certified AI & ML Blackbelt plus program has 20+ projects that can be used in multitude of industries!

Project: Movie Recommender System

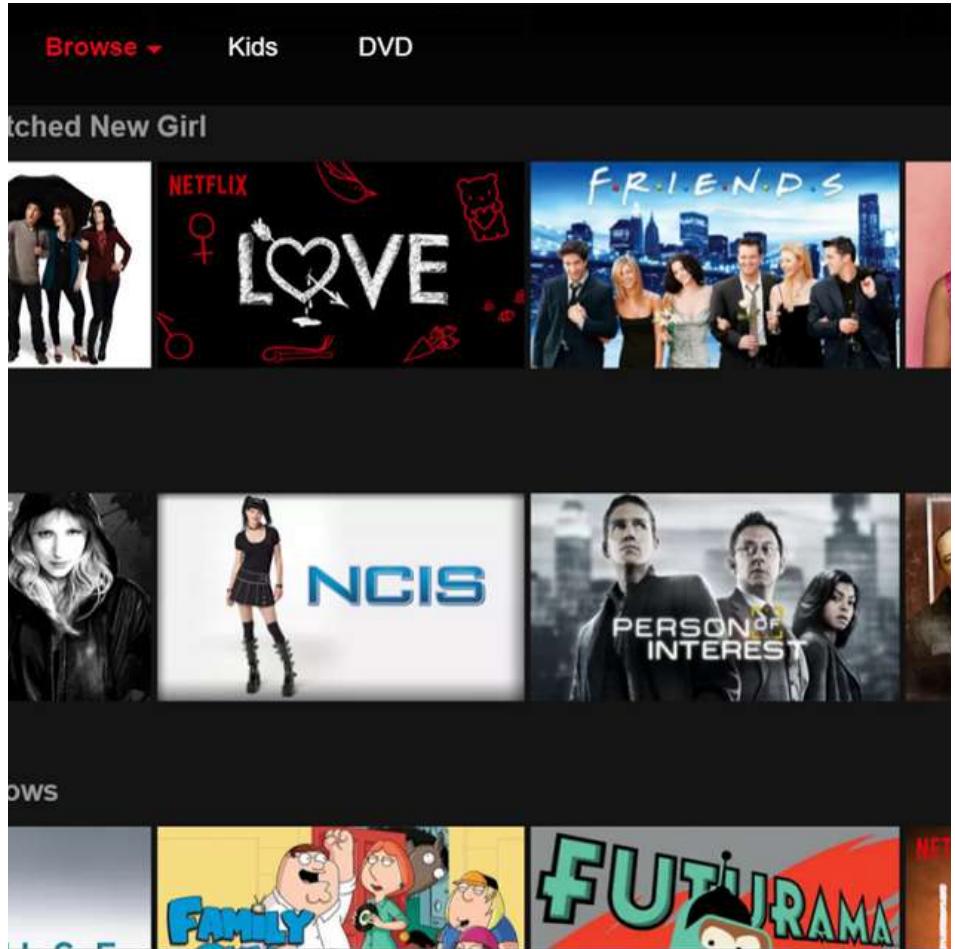


TV Mysteries



Innocent TV Shows

Overview of the Project



- Have you ever been on an online streaming platform like Netflix, Amazon Prime, Voot?
- Recommender Systems are capable of learning your watching pattern and in turn provide you with relevant suggestions.
- In this project, we will use ratings collected from real users along with movie details and user demographics to recommend top movies thus working to enhance the user experience for an online streaming service.

Project: Article Recommender System



Overview of the Project

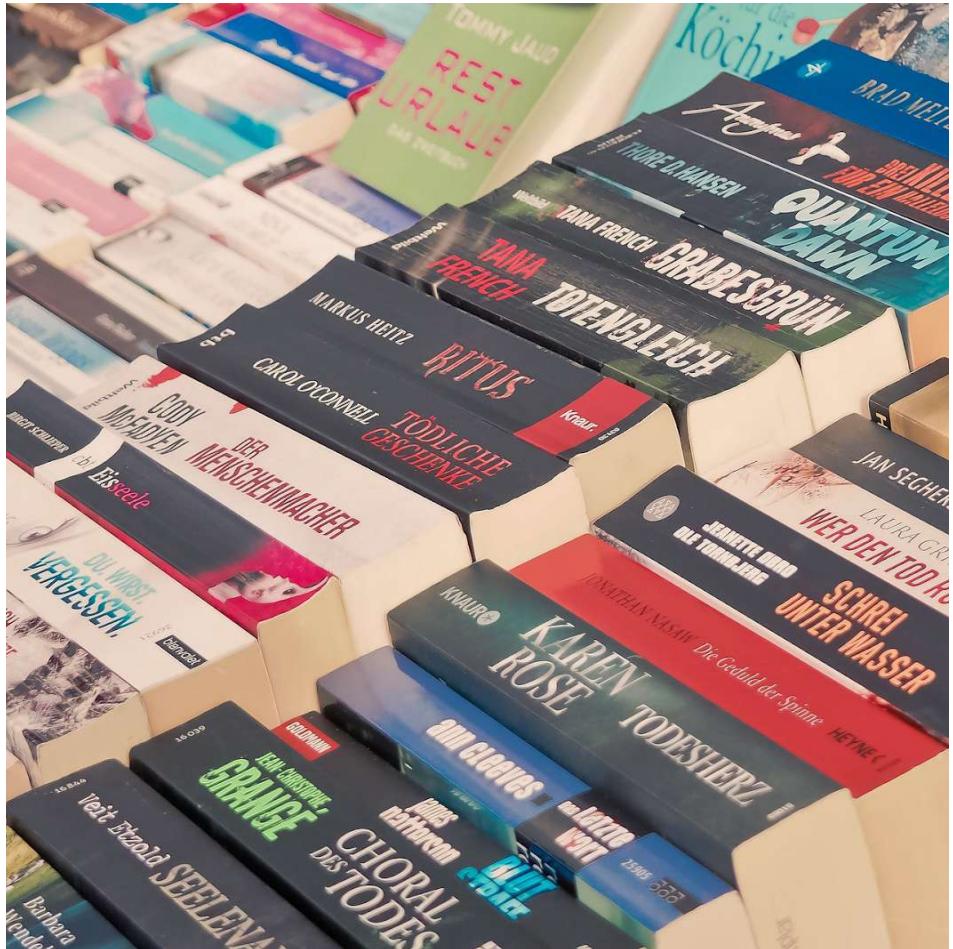


- In the online world, a user is flooded with information from different sources in which it is not uncommon for a user to change between online portals or consume content from portals that merge articles from different sources. Having such a huge amount of information, it becomes difficult to select the article that a user will like. Consequently, users stop the consumption of news or lower it down..
- To overcome the problem of information overloading (difficulty in making a decision caused by the presence of too much information), recommender systems can be used.
- Sérendipité is an article aggregation platform where articles from different domains such as technology, politics, news and so on are shared by its users and then these articles are recommended on the basis of reading habits
- They have a rating system for articles under which the users when they read the article rate it on a scale of 1 to 5. We will help them figure out what they can achieve with a collaborative filtering or content-based filtering system by accurately predicting ratings for each user article combination.

Project: Online Book Recommender System



Overview of the Project



- Topreads is a social networking website that allows users to share information about books that they are reading, get book recommendations from other users and meet new people online.
- The objective of this project is to create an automatic recommendation system that uses prior knowledge of a user's rating for some books to suggest new titles to add to his collection.

Project: Market Basket Analysis for a Supermarket



Overview of the Project



- A grocery supermarket aims to make it easy to fill your refrigerator and pantry with your personal favourites and staples when you need them.
- Association rules are used to predict the likelihood of products being purchased together and count the frequency of items that occur together, seeking to find associations that occur far more often than expected.
- In this project, we will work on transaction data from a supermarket to identify such combinations of items from a grocery store. So for example, if someone buys milk, there is a high probability that the same customer will buy bread and eggs along with it. But there are more association rules that are less obvious and can positively impact revenue.

Project: Hate Speech Classification



Problem Technique, Statement and Data Description



- **Problem Technique:**
Text Classification
- **Problem Statement:**
Hate speech is an unfortunately common occurrence on the Internet. Often social media sites like Facebook and Twitter face the problem of identifying and censoring problematic posts while weighing the right to freedom of speech. The objective of this task is to detect hate speech in tweets. For the sake of simplicity, we say a tweet contains hate speech if it has a racist or sexist sentiment associated with it. So, the task is to classify racist or sexist tweets from other tweets.
- **Data Description:**
train.csv: ['id', 'label', 'tweet'] contains 31962 observations
test.csv: ['id', 'tweet'] contains 17197 observations
- **Business Solving Similar Problems:**
Spam Filtering, Profanity Detection

Project: Summarization of Customer Reviews



Problem Technique, Statement and Data Description



- **Problem Technique:**
Text Summarization
- **Problem Statement:**
Automatic Text Summarization is a process of generating a concise and meaningful summary of text from multiple text resources such as news articles, blog posts, research papers, customer reviews, emails, and tweets. In this project, we will create short summaries of customer reviews on the women's clothing dataset, using sequence-to-sequence modeling

- **Data Description:**
Womens Clothing E-Commerce Reviews.csv: ['Title', 'Review Text'] contains 23,486 observations of product-reviews
- **Business Solving Similar Problems:**
Financial Research, Legal contract analysis

Project: Loan Eligibility Prediction



Problem Technique and Statement



- **Problem Technique:**
Classification
- **Problem Statement:**
Dream Housing Finance company deals in all home loans. They have presence across all urban, semi urban and rural areas. Customers first apply for a home loan after that company validates the customer eligibility for the loan.

Company wants to automate the loan eligibility process (real time) based on customer detail provided while filling an online application form. These details are Gender, Marital Status, Education, Number of Dependents, Income, Loan Amount, Credit History and others. To automate this process, they have given a problem to identify the customers segments, those are eligible for loan amount so that they can specifically target these customers. Here they have provided a partial data set.
- **Business Solving Similar Problems:**
Banks: Automating the loan approval system

Data Description



- **Loan id:**
Unique Loan ID
- **Gender:**
Male/ Female
- **Married:**
Applicant married (Y/N)
- **Dependents:**
Number of Dependents
- **Education:**
Applicant Education (Graduate/ Under Graduate)
- **Self_Employed:**
Self employed (Y/N)
- **Applicant Income:**
Applicant income
- **CoapplicantIncome:**
Coapplicant income
- **LoanAmount:**
Loan amount in thousands
- **Loan_Amount_Term:**
Term of loan in months
- **Credit_History:**
credit history meets guidelines
- **Property_Area:**
Urban/ Semi Urban/ Rural
- **Loan_Status:**
Loan approved (Y/N)

Project: Classify Emergency Vehicles from Non-Emergency Vehicles



Problem Technique and Statement



- **Problem Technique:**
Image classification
- **Problem Statement:**
Task here is to classify the images of vehicles as either belonging to the emergency vehicle or non-emergency vehicle category. For the same, you are provided with the train and the test dataset. Emergency vehicles include police cars, ambulance and fire brigades.
- **Business Solving Similar Problems:**
Traffic Management Companies: Automating the traffic signals
Self Driving cars, etc.

Data Description



- **train.zip**

contains 2 csvs and 1 folder containing image
data
train.csv –

a) ['image_names',
'emergency_or_not']
contains the image name
and correct class for 1646
(70%) train images
– contains 2352

b) images for both train
and test sets

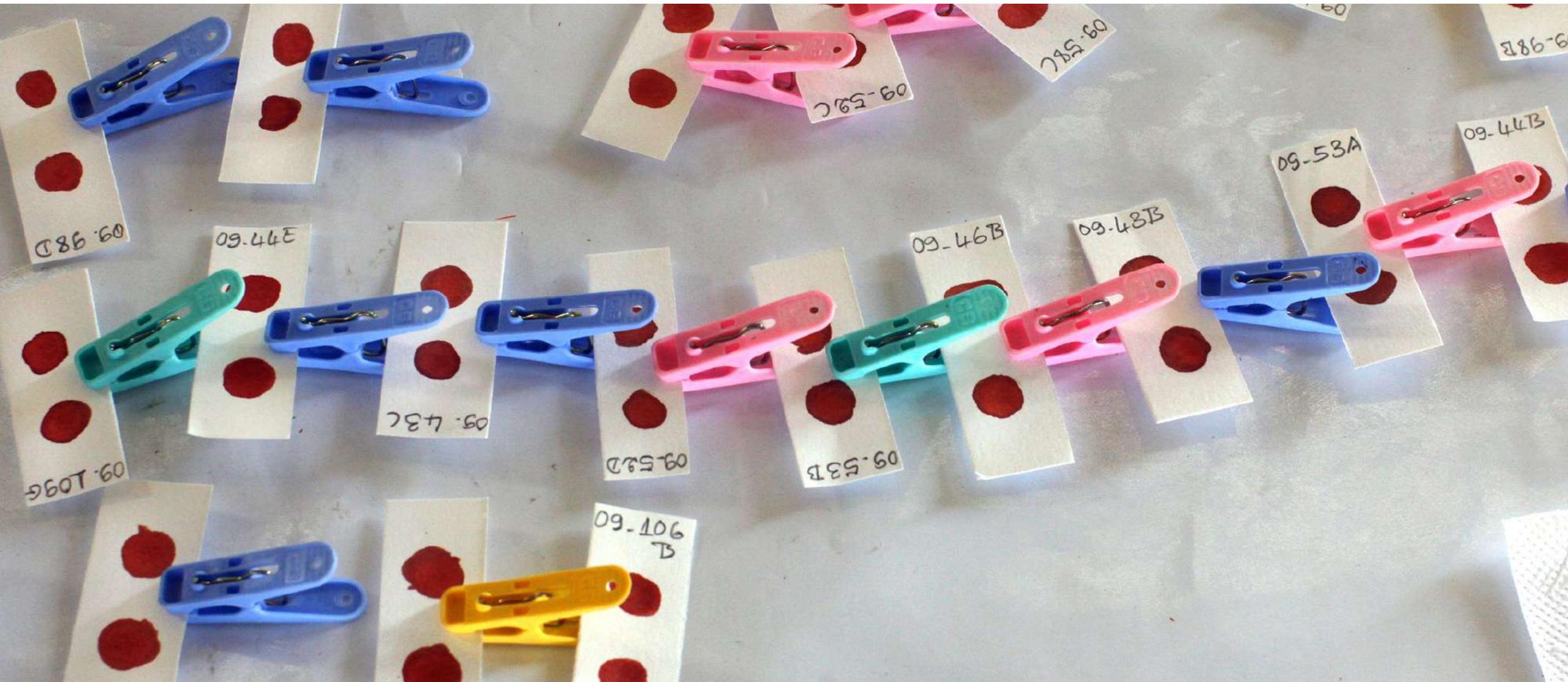
- **test.csv**

['image_names'] contains
just the image names for
the 706 (30%) test images

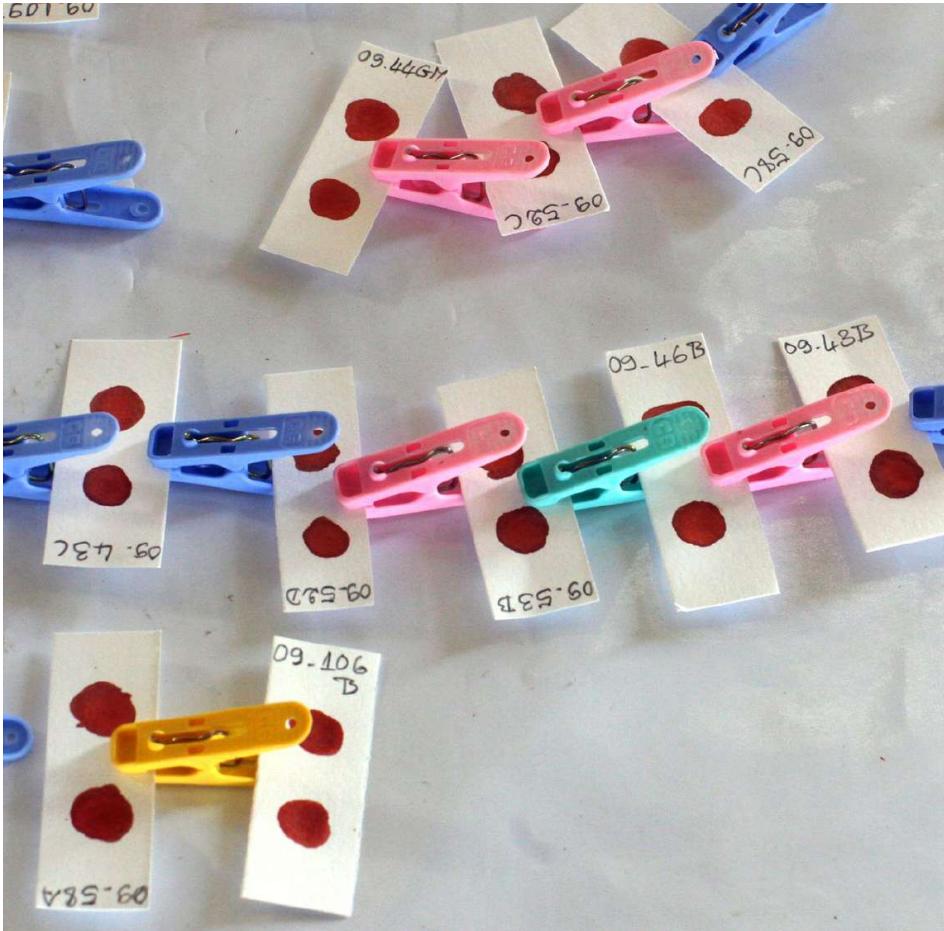
- **sample_submission.csv**

['image_names','emergency_or_not']
contains the exact format
for a valid submission

Project: Malaria Detection from blood cell Images



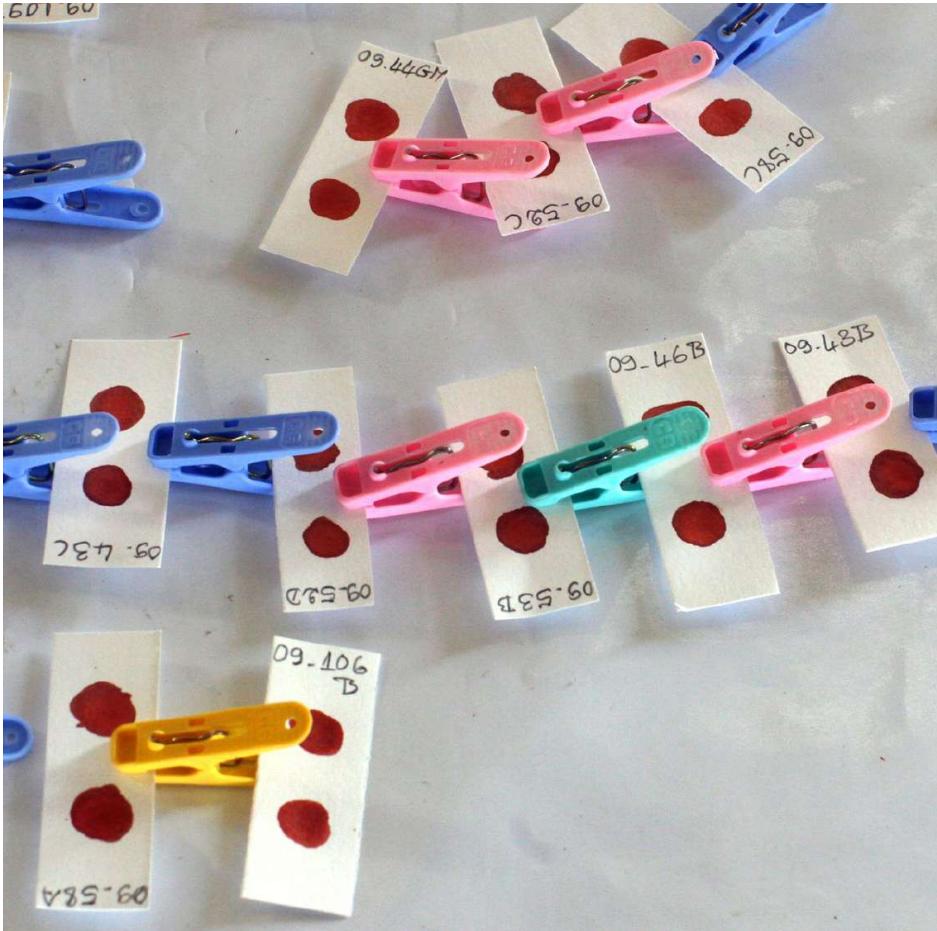
Learning Objective



- Learning Objective:
Working with Image Data
Implementing Deep Learning Models for Image Classification

- Business Solving Similar Problems:
Healthcare Industry

Problem Technique, Statement and Data Description



- Problem Technique

Image Classification

- Problem Statement

Malaria diagnosis involves close examination of the blood smear at 100x magnification. This is followed by a manual counting process wherein experts count the number of Red blood cells impacted by parasites. Automatic detection of Malaria from blood smear image is a scalable solution and can save a lot of hours for healthcare industry going a long way in our battle against this deadly disease.

The object in this project is to use Deep learning techniques to predict whether the blood sample is taken from an infected person.

- Data Description

filename: Unique names for the image

label: Target class against each image

Project: Lane segmentation for Self-driving cars



Problem Technique and Statement



- Problem Technique:
Image Segmentation
- Problem Statement:

Self-driving cars require a deep understanding of their surroundings, in order to understand where to drive, when to stop, when to speed up, how much distance to keep between consecutive cars and so on.

So the fundamental problem is to understand the scene, recognize the road, pedestrians, cars, and sidewalks at a pixel-level accuracy. In this project, we build various models to perform lane segmentation tasks for the given images.

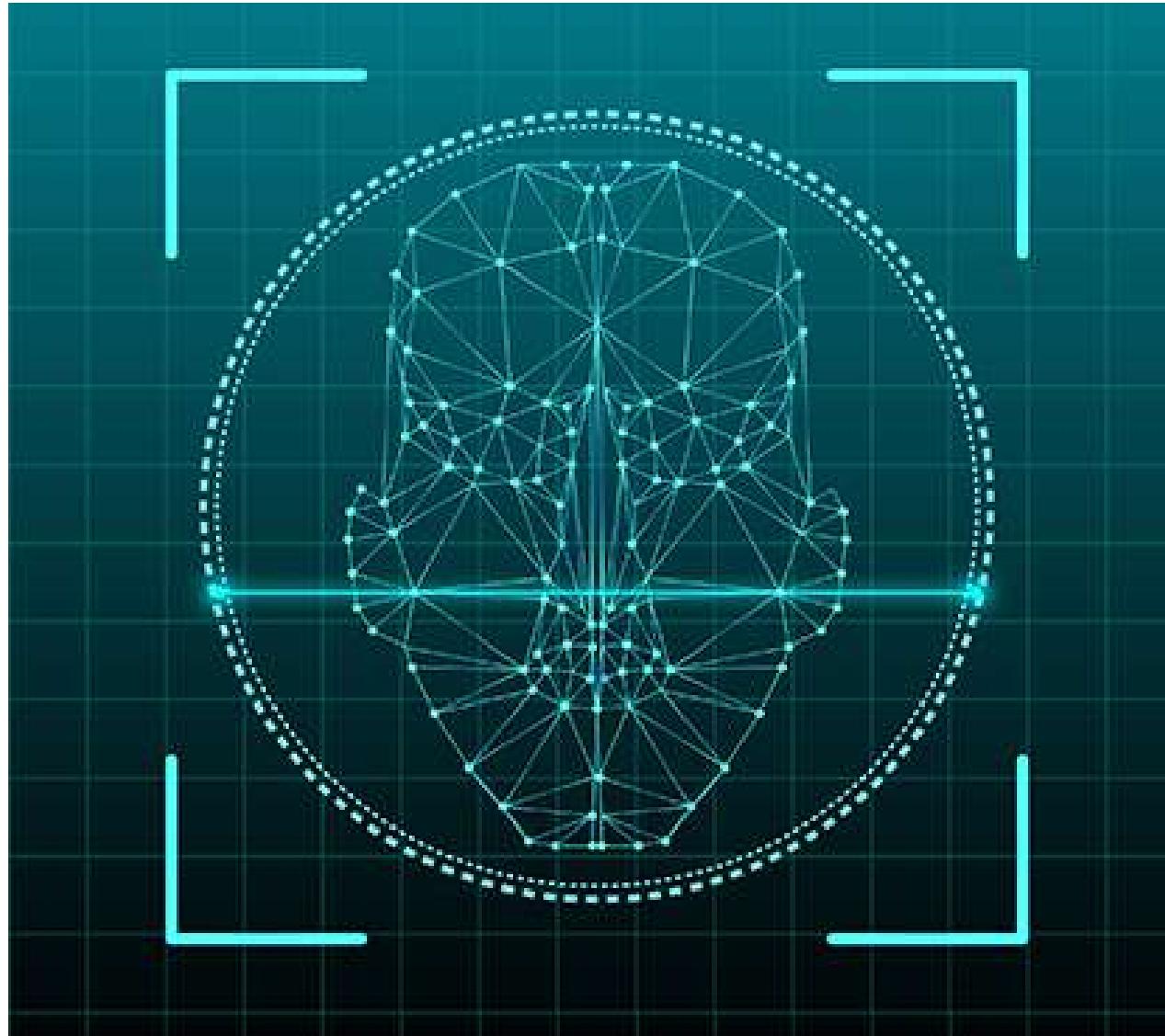
Data Description



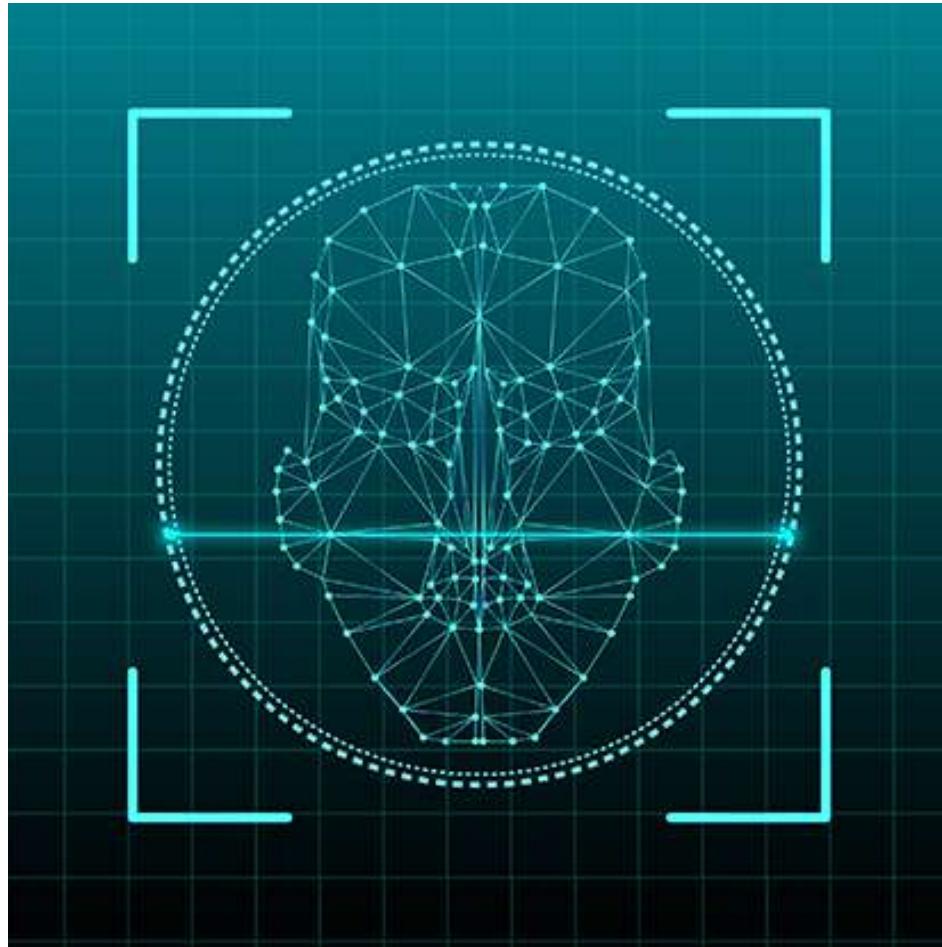
- **Data Description**
train: This folder contains the training images
trainannot: This folder contains the annotations for training images
val: This folder contains the validation images
valannot: This folder contains the annotations for validation images
test: This folder contains the test images
testannot: This folder contains the annotations for test images

- **Business Solving Similar Problems:**
Self Driving Cars
Cancer detection in healthcare industry

Project: Identifying faces from images



Problem Technique, Statement and Data Description

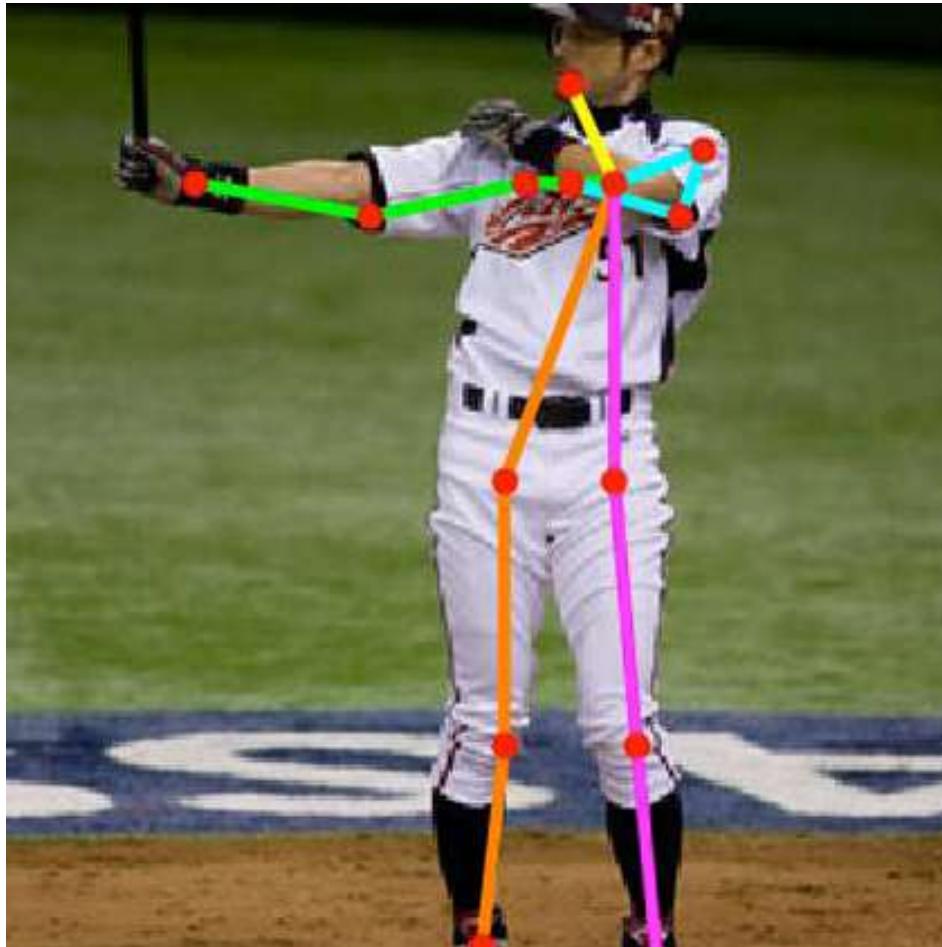


- **Problem Technique:**
Face Detection
- **Problem Statement:**
In this project you will discover how to utilize State-of-Art Deep Learning techniques for Detecting human faces in images.
- **Data Description:**
More than 32,000 images with annotations for around 390000 faces.
- **Business Solving Similar Problems:**
Counting the attendees in a conference
Mask detection
Measuring attentiveness of a class

Project: Human Pose Estimation



Problem Technique, Statement and Data Description



- **Problem Technique:**
Pose Detection
- **Problem Statement:**

What if you can build an AI system that tells you whether you have the right posture for a particular Yoga pose or whether your stance is not correct for a particular batting position in Cricket? These are the kind of applications that you can perform using Pose Estimation.

In this project, we will develop a system that can detect human figures (body shape) and localize joints (elbows, wrists, etc) of the human body in images.
- **Data Description:**

More than 30,000 images with annotated key points.
- **Business Solving Similar Problems:**

Correct yoga posture identification
Cricket stance identification

Project: Build an Auto-Tagging System

StackExchange



Search on Cross Validated...

ome

uestions

ags

sers

nanswered

hyperparameters optimisation with linear kernel

Asked today Active today Viewed 12 times



1

I want to conduct an SVM model-regression (i.e., support vector regression), using a **linear kernel function**. Does it make sense to perform a cross-validation hyperparameter optimization when the kernel function is linear? If so, what should be the range of values for each hyperparameter in the search?



Thank you



machine-learning

cross-validation

svm

kernel-trick

rbf-kernel

Problem Technique and Statement

Cross Validated...

Hyperparameters optimisation with

today Active today Viewed 12 times

I want to conduct an SVM model-regression (i.e., support vector regression). I am using a linear kernel function. Does it make sense to perform hyperparameter optimization when the kernel function is linear? I am interested in finding the range of values for each hyperparameter in the support vector regression model.

Thank you

Tags: machine-learning, cross-validation, svm, kernel-trick, r

- **Problem Technique:**
Multi-Label Text Classification
- **Problem Statement:**
One of the most interesting applications of NLP is to automatically infer and tag the topic of a question. In this project, we'll start from exploratory analysis of StackExchange questions and answers, and then we will build Sequence models using Recurrent Neural Networks (RNNs), Long Short Term Memory (LSTM) & Convolutional Neural Networks to predict the tags for the questions in the dataset.

- **Business Solving Similar Problems:**
Community Forums: Assigning category tags to online posts such as stack exchange questions, product reviews, etc.

Data Description

Cross Validated...

Hyperparameters optimisation with

today Active today Viewed 12 times

I want to conduct an SVM model-regression (i.e., support vector regression). I am using a linear kernel function. Does it make sense to perform hyperparameter optimization when the kernel function is fixed? I am interested in finding the range of values for each hyperparameter in the support vector regression model.

Thank you

machine-learning

cross-validation

svm

kernel-trick

- **Questions.csv:**

contains 85,085 questions asked at the StackExchange platform

Id: Question ID

OwnerUserId: User ID

CreationDate: Date of posting question

Score: Count of Upvotes received by the question

Title: Title of the question

Body: Text body of the question

- **Tags.csv:**

[‘Id’, ‘Tag’] contains tags along with question Id.

Web Traffic Forecasting



Problem Technique, Statement and Data Description



- **Problem Technique:**
Time Series Forecasting
- **Problem Statement:**
Time series data has been the fastest growing category of data in the past two years, and both traditional industries and emerging technology industries have been generating more and more time series data. In this project, we will work on web traffic data. Web traffic is basically, the number of sessions in a given time duration. We will build deep learning models to forecast the number of sessions on a web portal.
- **Business Solving Similar Problems:**
[Website traffic forecasting](#)
- **Data Description:**
Webtraffic.csv: ['Hour Index', 'Sessions'] contains 4,896 observations of session count at hourly-level

Project: Social Media Information Extraction

Guided Project



Problem Technique, Statement and Data Description



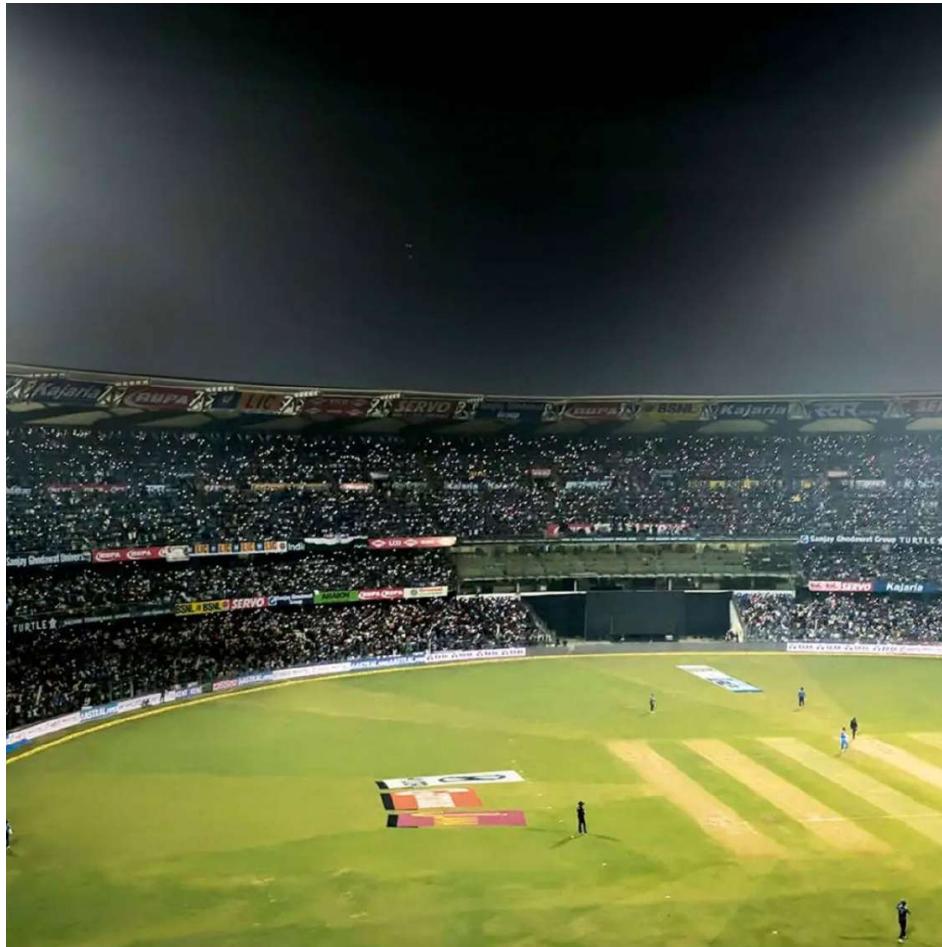
- **Problem Technique:**
Information Extraction
- **Problem Statement:**
Information Extraction (IE) is a crucial cog in the field of Natural Language Processing (NLP) and linguistics. This project is designed to teach you how to extract relevant information such as entities, ngrams, keywords and sentiments from social media data using NLP techniques. The project highlights the importance of nlp techniques, studied so far, to extract business insights from the text data.

- **Data Description:**
tweets.csv: ['text'] contains 14940 observations (tweets)
- **Business Solving Similar Problem:**
Text Data Mining, Knowledge Graph Preparation

Project: Categorization of Sports Articles



Problem Technique, Statement and Data Description

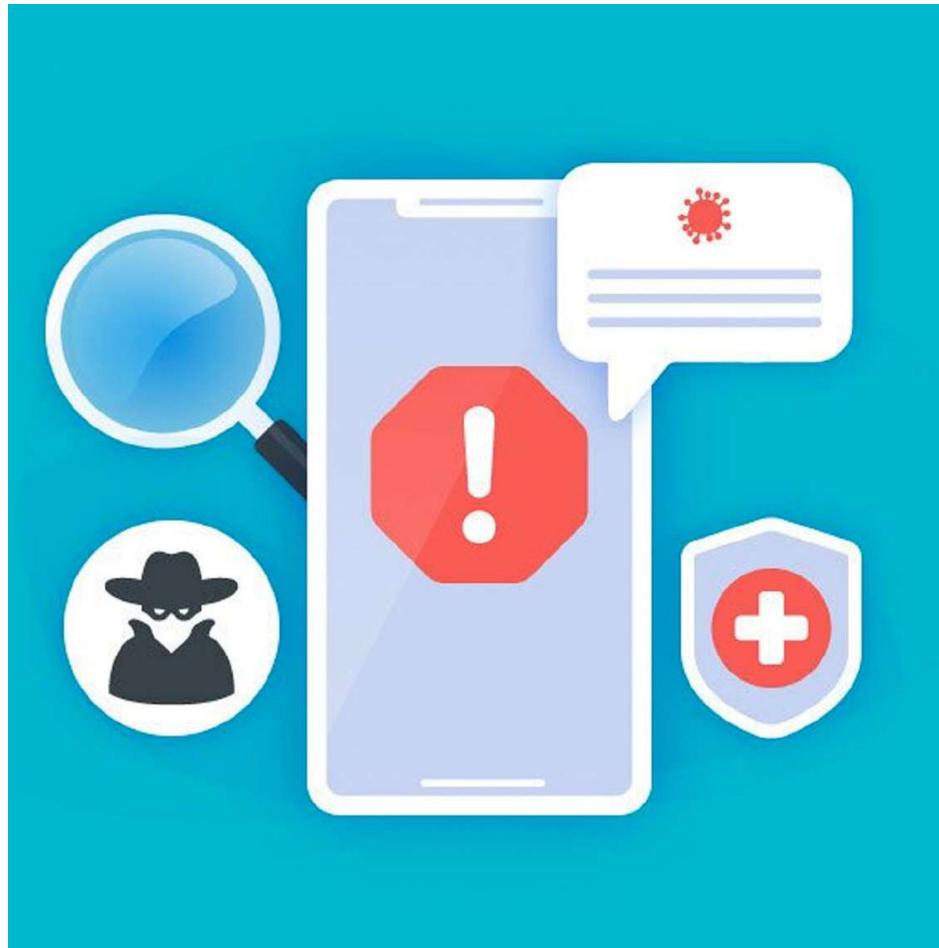


- **Problem Technique:**
Topic Modelling
- **Problem Statement:**
Document categorization or segregation is an important NLP task which is used across a wide range of industries. In this project, we will learn to segregate sports-news articles using an unsupervised technique called Topic Modelling. We will categorize the articles based on the content of the articles, i.e., similar articles will be grouped together.
- **Data Description:**
sports.zip: contains 471 text files of sports articles
- **Business Solving Similar Problems:**
Search Engines, Discovering latent patterns in massive text datasets

Project- SMS Spam Classification



Problem Technique, Statement and Data Description

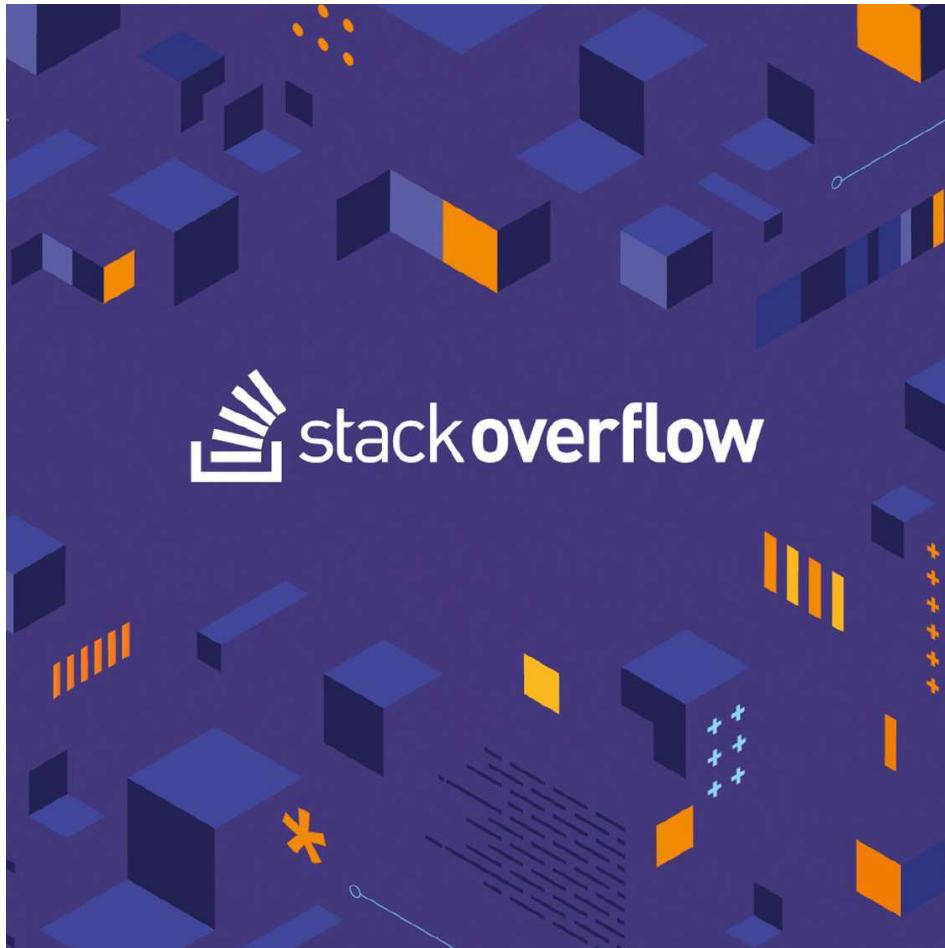


- **Problem Technique:**
Text Classification
- **Problem Statement:**
This project is about the classification of SMS text messages as spam or nonspam. In this project, you will learn to preprocess sms text data, feature engineering techniques, and text classification techniques using machine learning and deep learning models.
- **Data Description:**
spamdata.csv: ['label','text'] contains 5572 observations. 'text' contains the sms text and 'label' contains the labels "ham" or "spam"
- **Business Solving Similar Problems:**
Spam Filtering, Profanity Detection

Project: Building Auto Tagging System

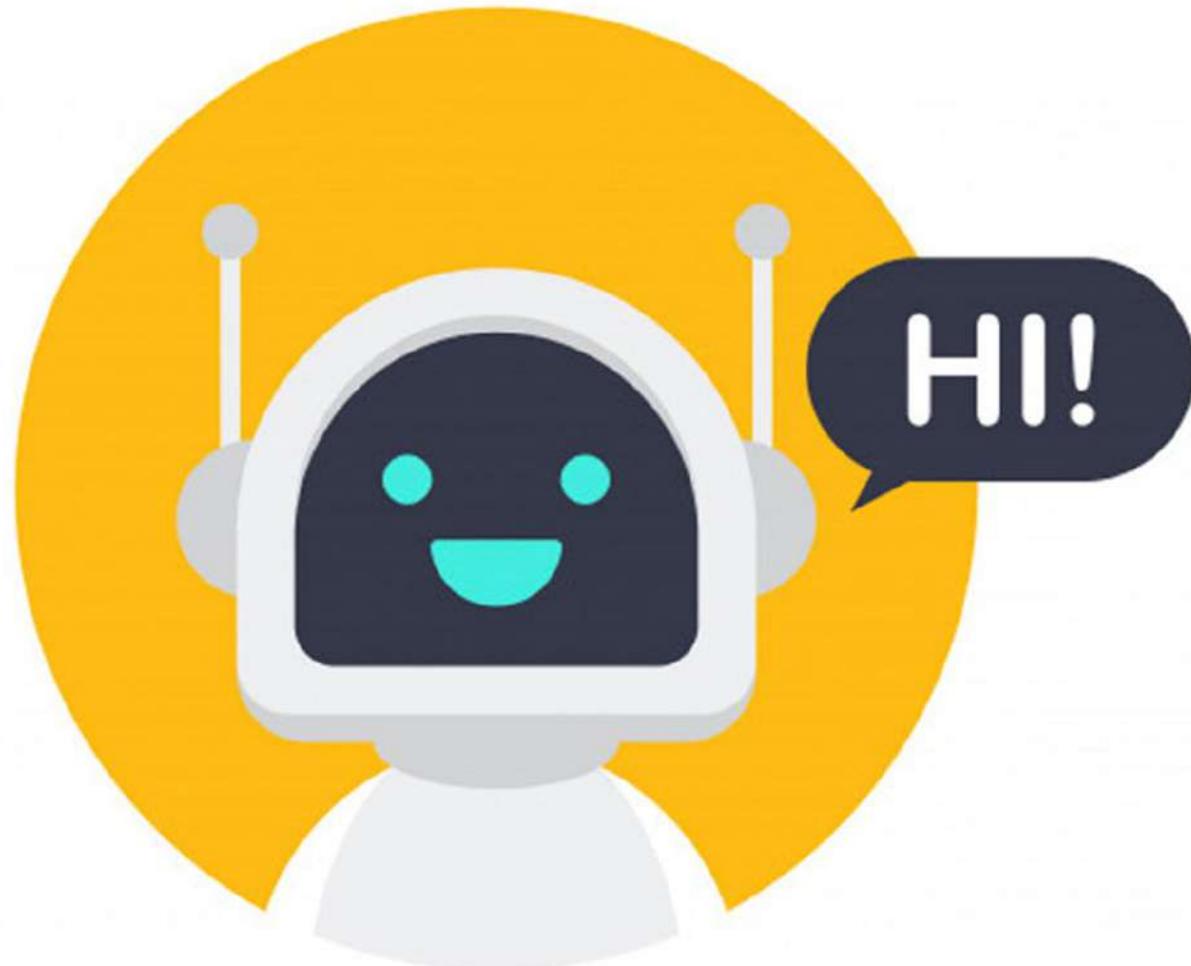


Problem Technique, Statement and Data Description

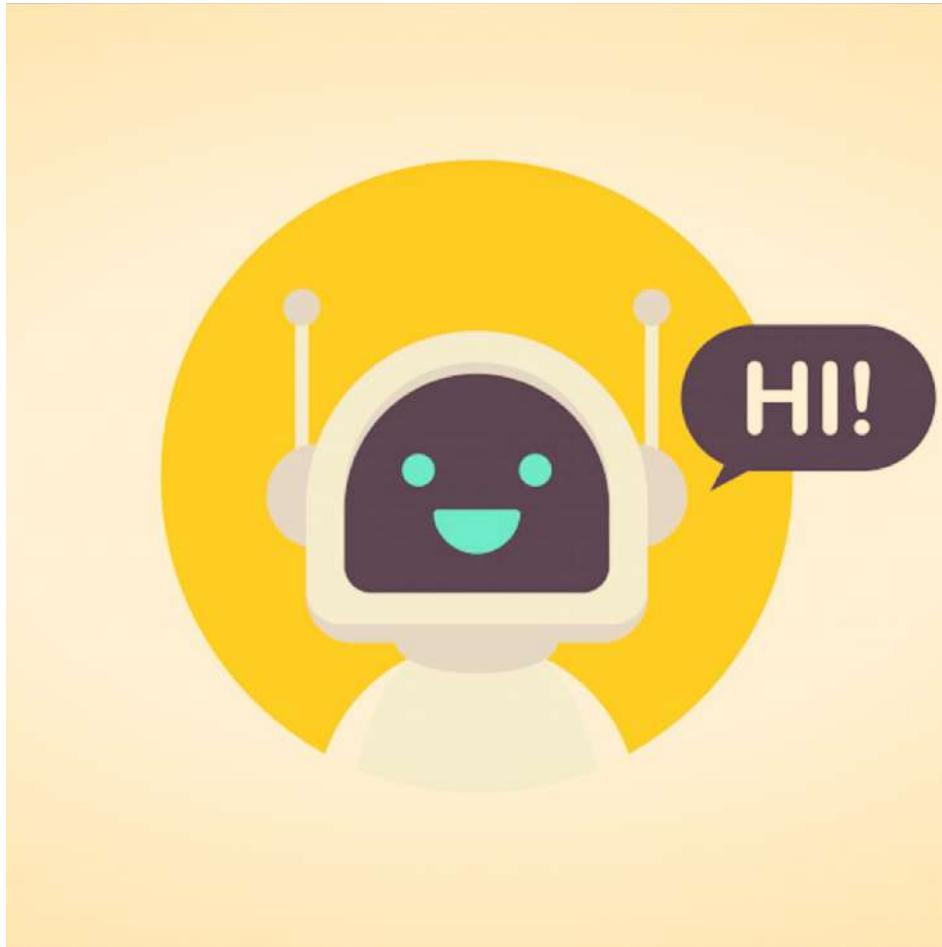


- **Problem Technique:**
Multi label Text Classification
- **Problem Statement:**
Automatic tagging of questions on platforms like stackoverflow is quite vital to build a healthy user engagement at the platform. These tags help both, the users seeking solutions to their problems and the experts capable of solving those problems, find the relevant questions easily. In this project, we will build an automatic tagger for the stackoverflow questions.
- **Data Description:**
auto_tagging_data_v2.h5: ['Title', 'Body', 'Tags'] contains 76,000 question-tags pairs
- **Business Solving Similar Problems:**
Online Content Tagging

Project: Build your first Chatbot

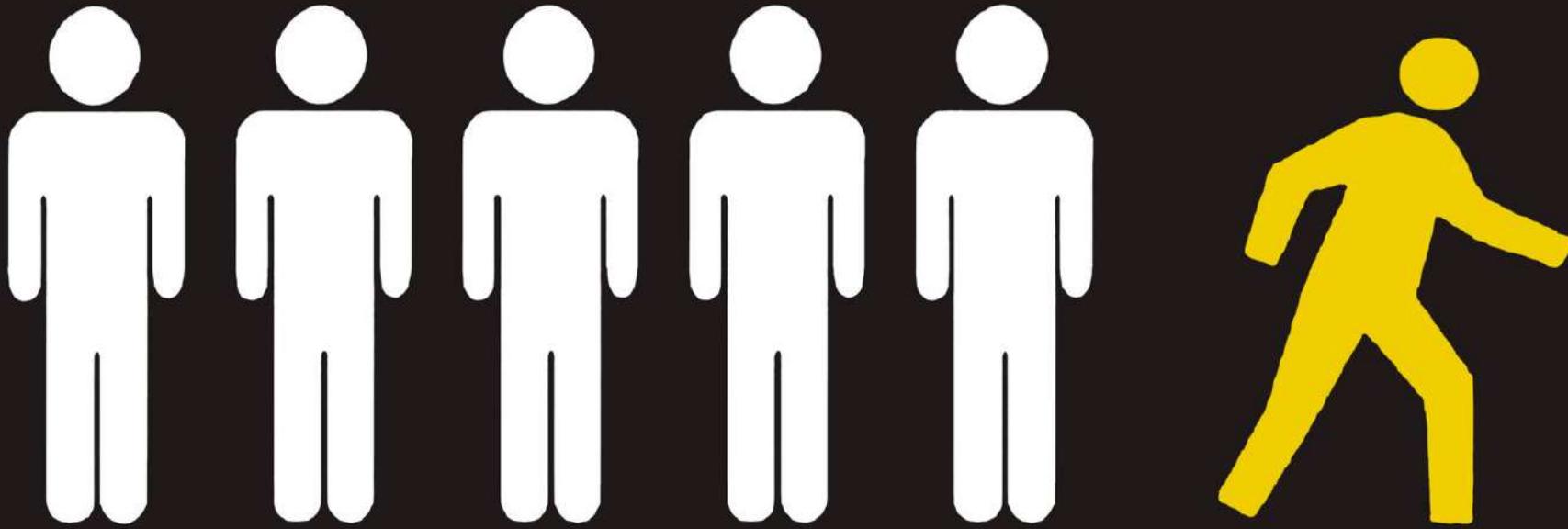


Problem Technique and Statement

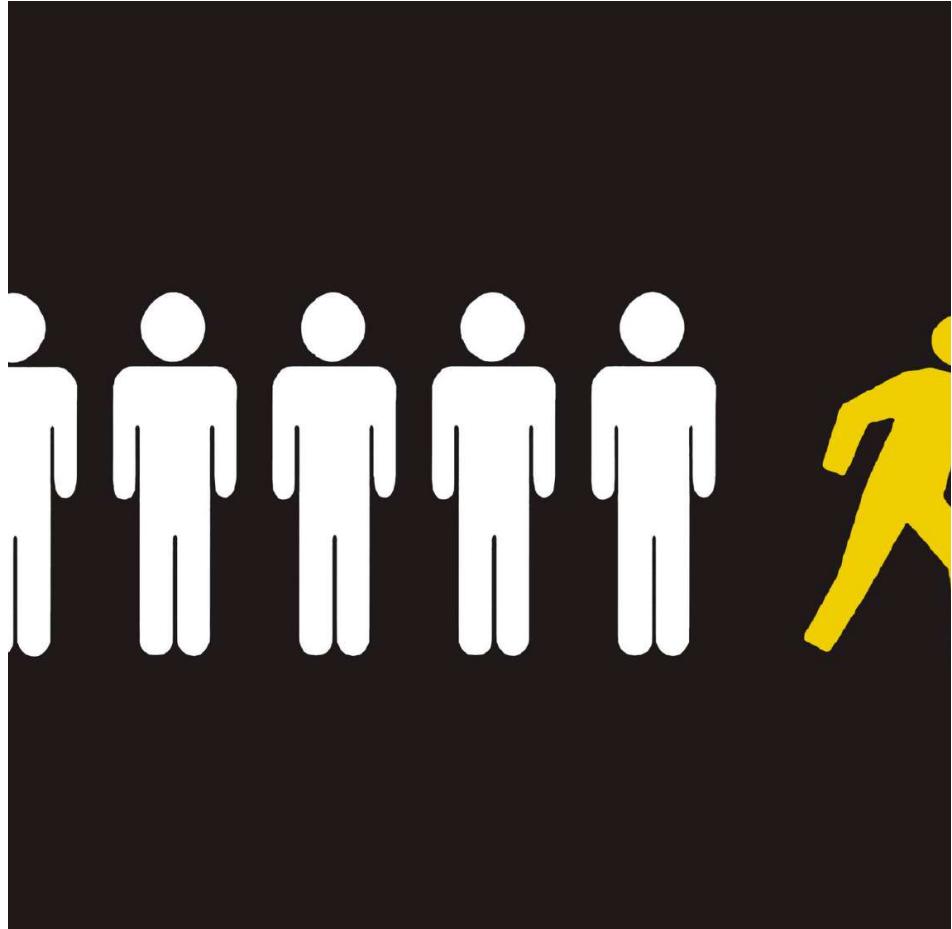


- **Problem Technique:**
Conversational Agent Development
- **Problem Statement:**
Chatbots are everywhere today, from booking your flight tickets to ordering food, chances are that you have already interacted with one. In this module, you will build your first chatbot to search for restaurants online and learn how to use it in a real-world application by deploying it on Slack.
- **Business Solving Similar Problems:**
Customer Support, Lead Generation

Project: Customer Churn Prediction

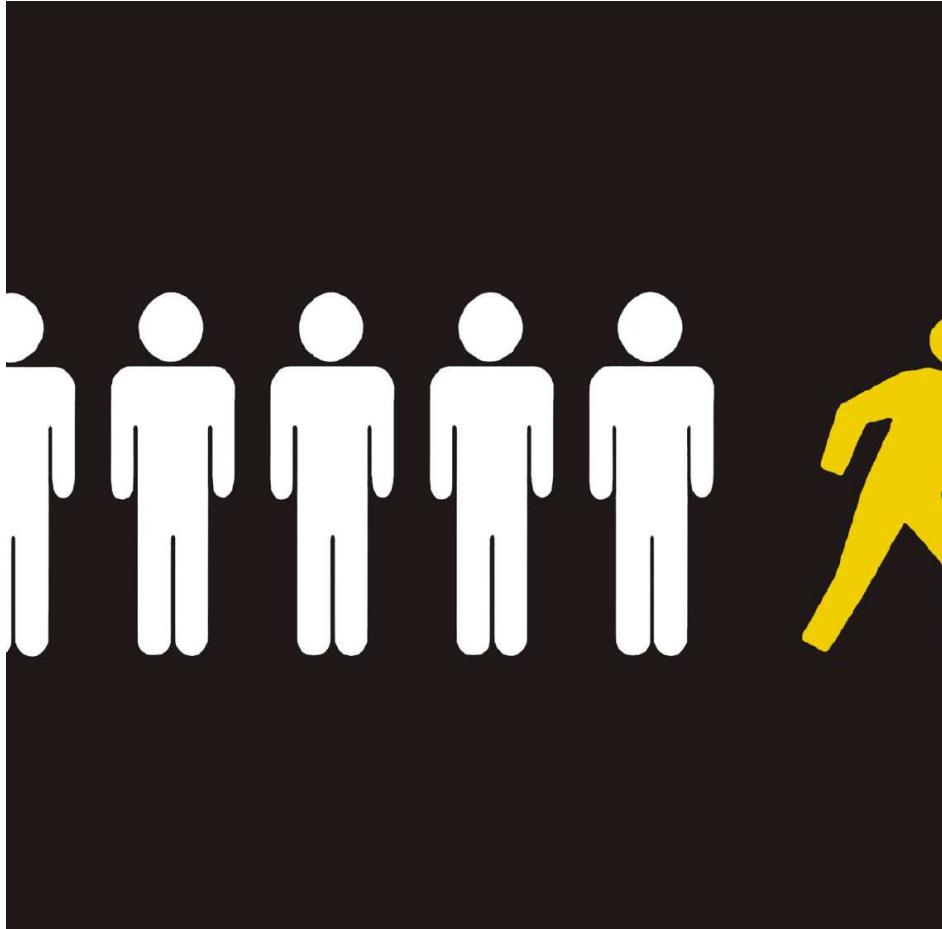


Learning Objective



- **Learning Objective:**
Perform **Data Exploration** to understand relationship between variables
Perform **Feature Engineering** Techniques to improve model performance
Learn to implement **Machine Learning Models**
- **Business Solving Similar Problems:**
Various Banking Institutions

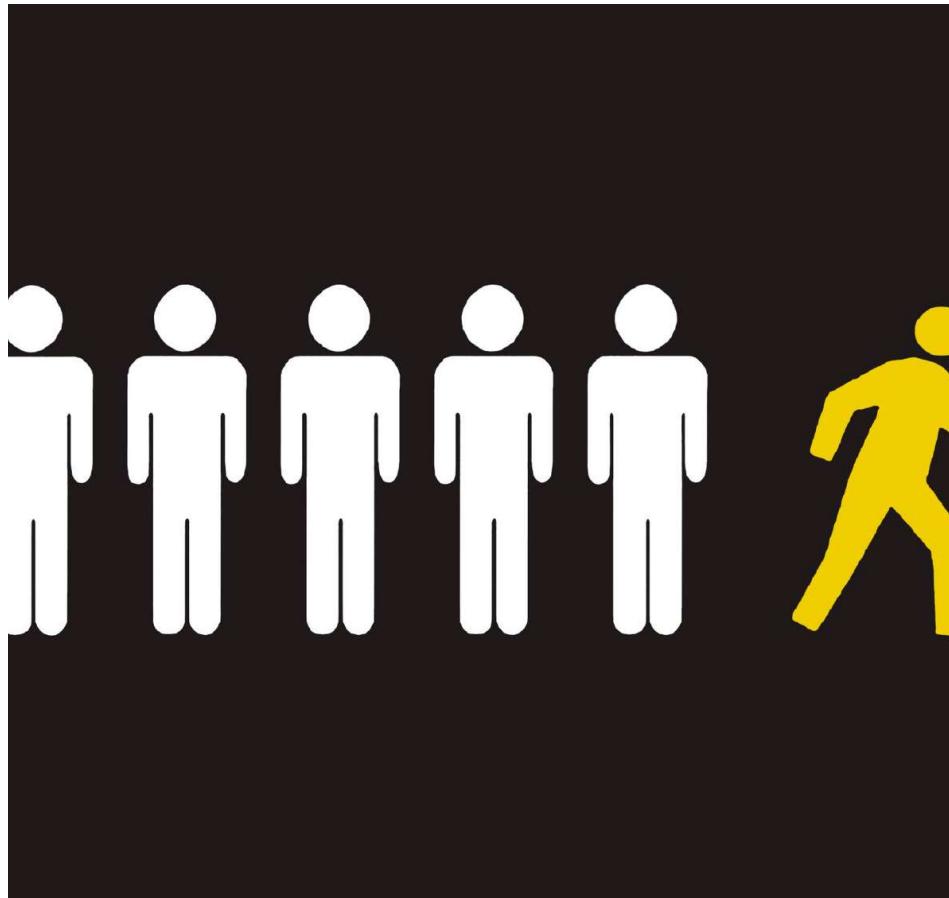
Problem Technique and Statement



- **Problem Technique:**
Classification
- **Problem Statement:**
A Bank wants to take care of customer retention for their product; savings accounts. The bank wants you to identify customers likely to churn balances below the minimum balance in next quarter. You have the customers information such as age, gender, demographics along with their transactions with the bank. Your task as a data scientist would be to predict the propensity to churn for each customer.

Data Description: Part 1

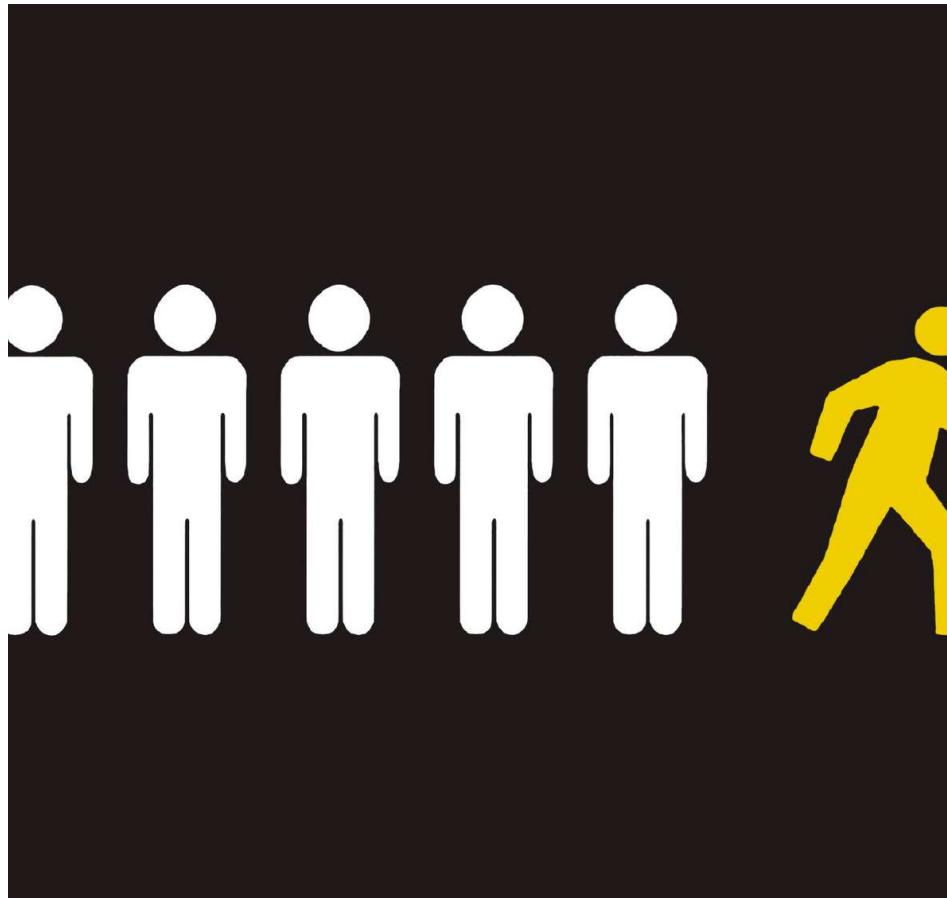
Demographic Information About Customers



- **customer_id** -
Customer id
- **vintage** -
Vintage of the customer
with the bank in number
of days
- **age** -
Age of customer
- **gender** -
Gender of customer
- **dependents** -
Number of dependents
- **occupation** -
Occupation of the
customer
- **city** -
City of customer
(anonymised)

Data Description: Part 2

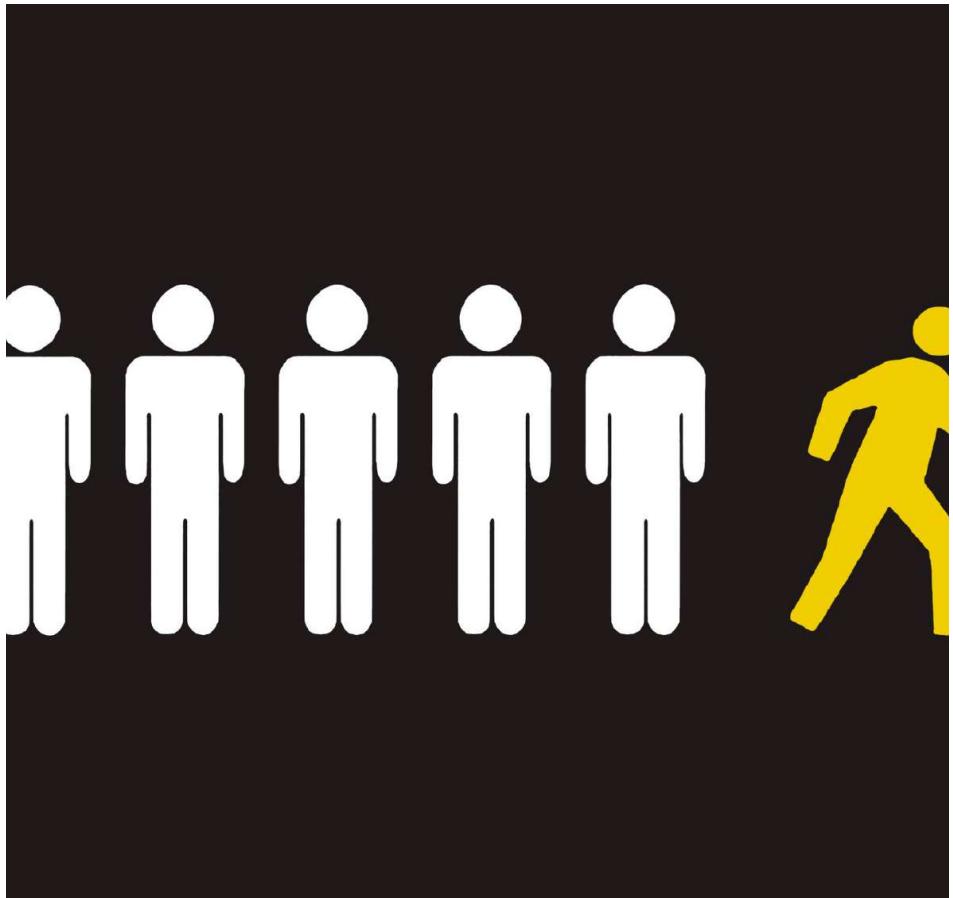
Bank Related Information For Customers



- **customer_nw_cat** -
Net worth of customer
(3:Low 2:Medium 1:High)
- **branch_code** -
Branch Code for
customer account
- **days_since_last_t** -
No of Days Since Last
Credit in Last 1 year

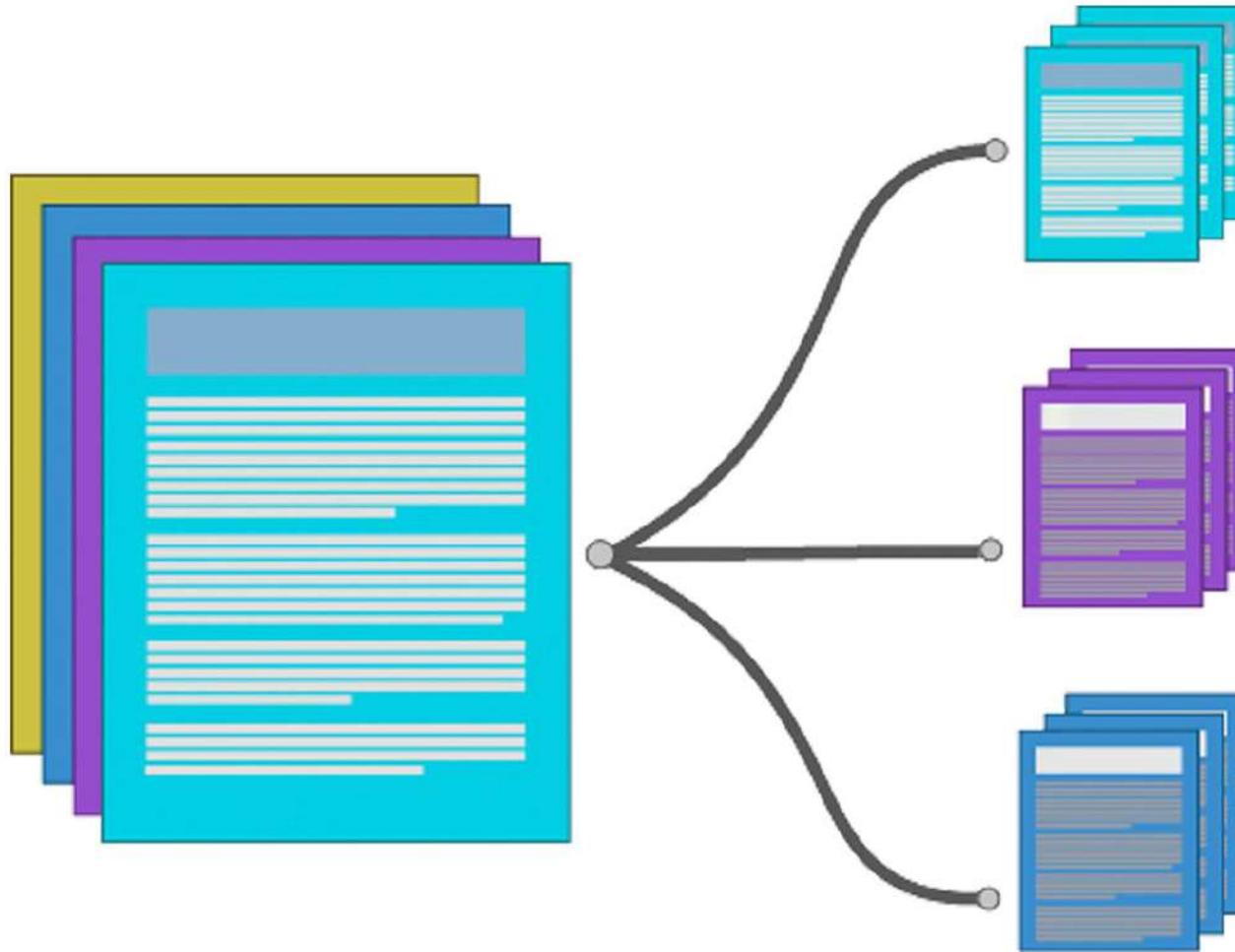
Data Description: Part 3

Transactional Information

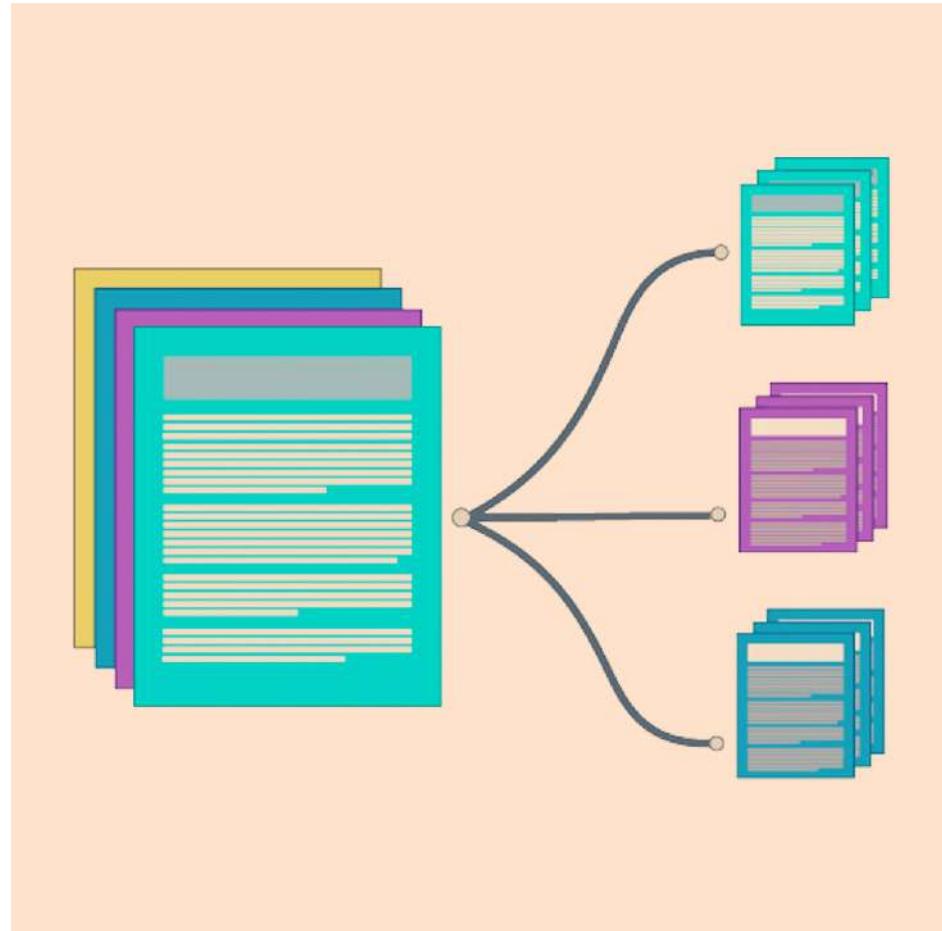


- **current_balance**
Balance as of today
- **previous_month_end_balance**
End of Month Balance of previous month
- **average_monthly_balance_prevQ**
Average monthly balances (AMB) in Previous Quarter
- **average_monthly_balance_prevQ2**
Average monthly balances (AMB) in previous to previous quarter
- **percent_change_credits**
Percent Change in Credits between last 2 quarters
- **current_month_credit**
Total Credit Amount current month
- **previous_month_credit**
Total Credit Amount previous month
- **current_month_debit**
Total Debit Amount current month
- **previous_month_debit**
Total Debit Amount previous month
- **current_month_balance**
Average Balance of current month
- **previous_month_balance**
Average Balance of previous month
- **churn**
Average balance of customer falls below minimum balance in the next quarter (1/0)

Project: Web Page Classification



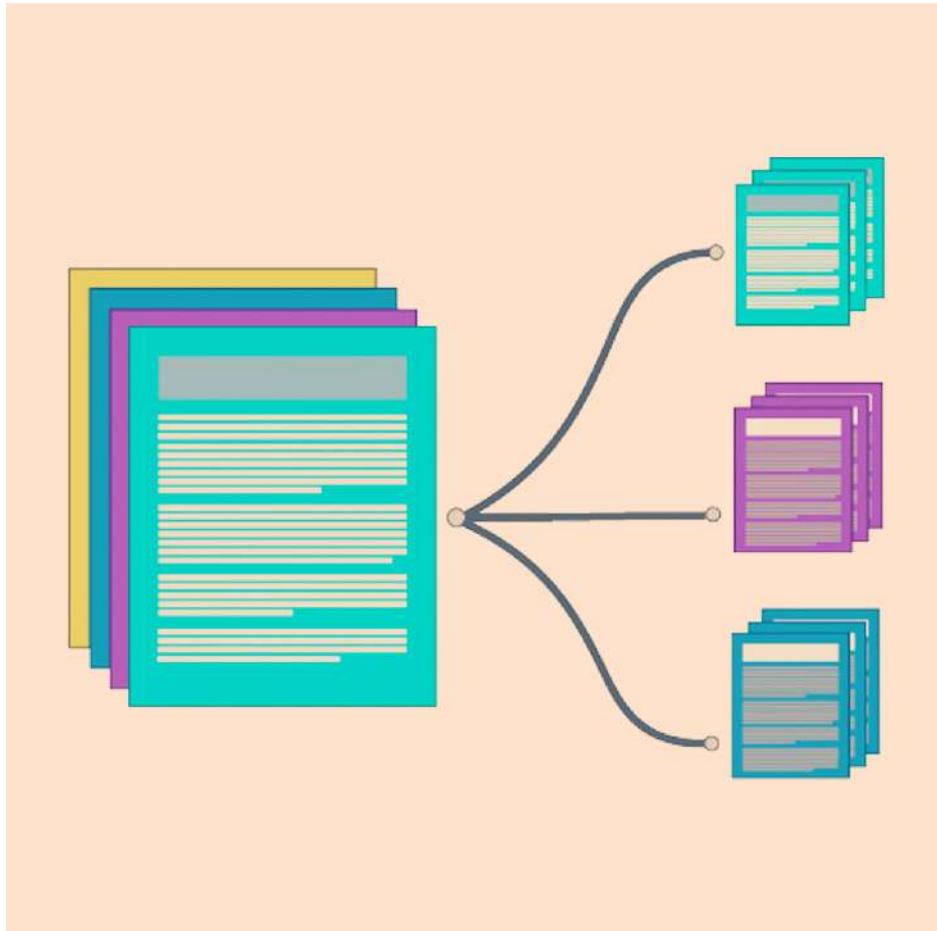
Learning Objective



- Learning Objective:
Working with **Text Data**
Cleaning and
Preprocessing text
corpus
Implementing ML
Models for text
classification

- Business Solving Similar Problems:
Web Directories, Online
Blog Sites

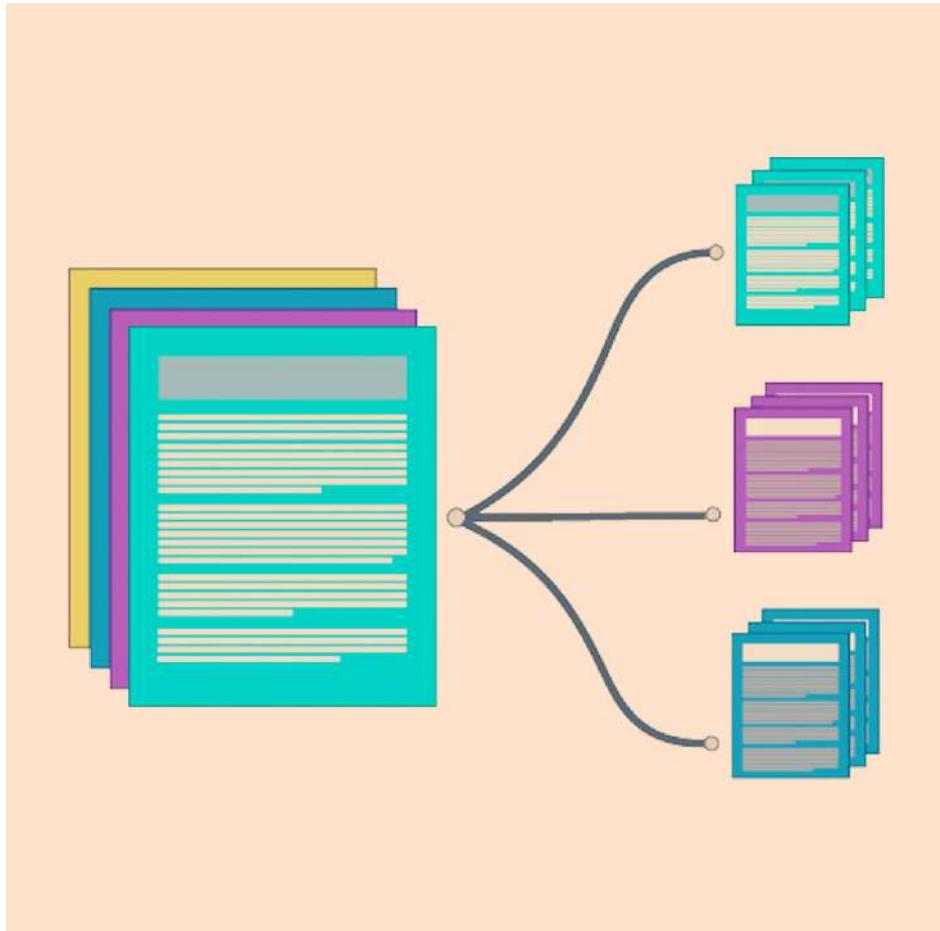
Problem Technique and Statement



- **Problem Technique:**
Multi-class Classification

- **Problem Statement:**
Classification of Web page content is vital to many tasks in Web information retrieval such as maintaining Web directories and focused crawling which is used to selectively seek out web pages that are relevant to a pre-defined set of topics.
The aim here is to build a web page classifier that can classify the web pages into their respective classes.

Data Description



- **web page_ID:**
Unique ID for the web page
- **Domain:**
Domain of the Web Page
- **Url:**
Complete URL of the Web Page
- **Tag:**
Target class of the web page (10 Classes)

Project: Big Mart Sales Prediction

Guided Project



Learning Objective



- Learning Objective
Implementing ML Models
Feature Importance
- Business Solving Similar Problems
Supermarket and Grocery Stores

Problem Technique and Statement



- Technique:
Regression
- Problem
Statement

The data scientists at Big Mart have collected 2013 sales data for 1559 products across 10 stores in different cities. Also, certain attributes of each product and store have been defined. The aim is to build a predictive model and predict the sales of each product at a particular outlet.

Data Description



- **Item_Identifier**
Unique product ID
- **Item_Weight**
Weight of product
- **Item_Fat_Content**
Whether the product is low fat or not
- **Item_Visibility**
The % of total display area of all products in a store allocated to the particular product
- **Item_Type**
The category to which the product belongs
- **Item_MRP**
Maximum Retail Price (list price) of the product
- **Outlet_Identifier**
Unique store ID
- **Outlet_Establishment_Year**
The year in which store was established
- **Outlet_Size**
The size of the store in terms of ground area covered
- **Outlet_Location_Type**
The type of city in which the store is located
- **Outlet_Type**
Whether the outlet is just a grocery store or some sort of supermarket
- **Item_Outlet_Sales**
Sales of the product in the particular store. This is the outcome variable to be predicted.

Project- Demand Forecast for food items

Guided Project



Project Description



- Demand forecasting is a key component of every growing online business. Too much inventory in the warehouse means more risk of wastage, and not enough could lead to out-of-stocks – and push customers to seek solutions from your competitors. In this capstone project, you'll create dashboards and storyboards to analyze and present your analysis.

Project- Descriptive Analytics of real life FIFA 19 Players



Project Description



- In this project we take a real life dataset of FIFA19 players and do descriptive analytics on it. We will go step by step as is done in real life by a data scientist - and we will walk you through the thought process of how data is understood, transformed into a useful format and how we get answers and insights from our data.

Forecasting the daily count of Airlines booking using historical data



Learning Objective, Problem Type, Statement and Data Description



- **Learning Objectives**

Working with time series data
Feature Engineering Techniques
Machine Learning Model implementation
Time Series Models for forecasting

- **Problem Type**

Univariate Time Series

- **Problem Statement**

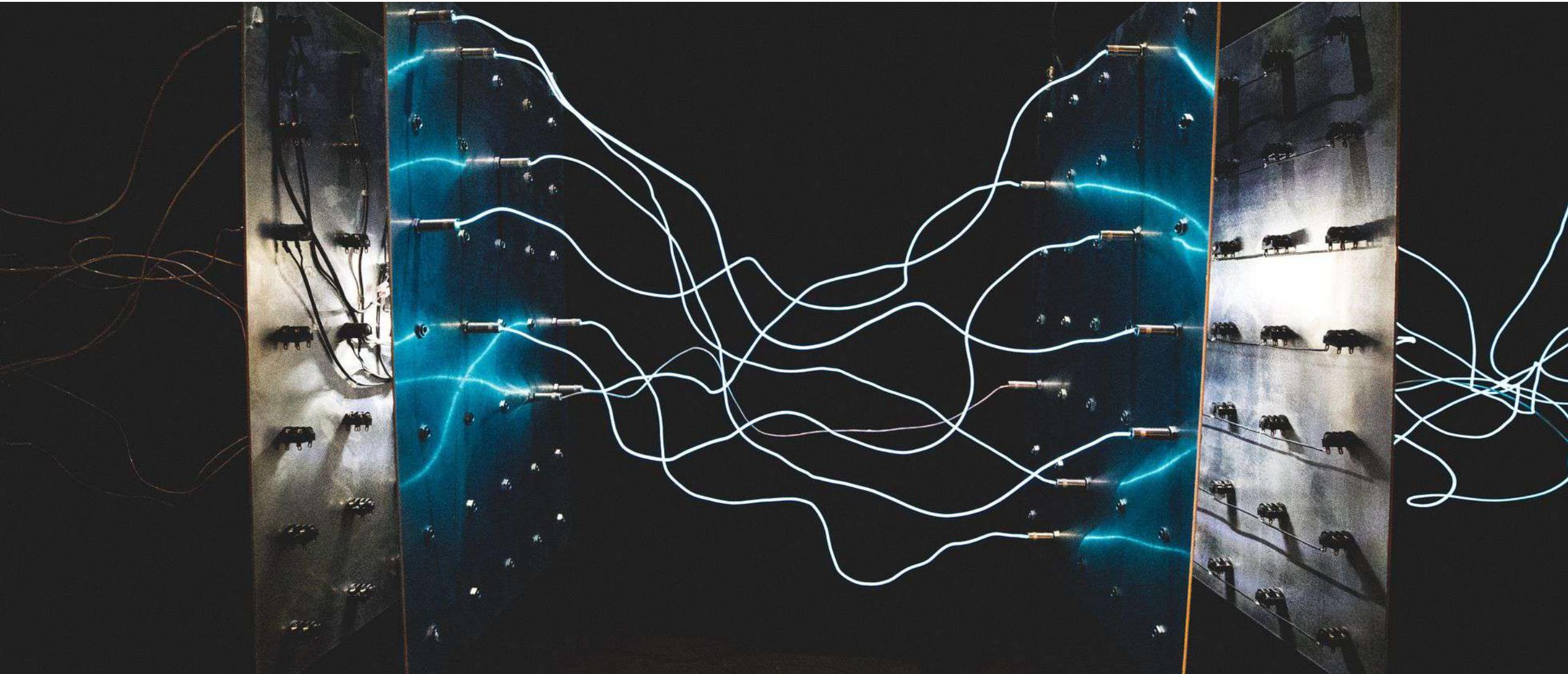
Efficiently managing and scheduling the flights could help save the manpower and other resources. This requires predicting the number of people expected to book the flights on a particular day. In this project you will learn to use the time series forecasting models for training on historical data and making predictions for the next two quarters.

- **Data Description**

Date - Date of booking
Count - Number of booking

Using Time series models for forecasting energy consumption

Guided Project



Learning Objective, Problem Type, Statement and Data Description



- **Learning Objectives**

Exploring time series data

Build machine learning model

Time Series Forecasting models

- **Problem Type**

Univariate Time Series

- **Problem Statement**

Forecasting the energy consumption can be useful for optimizing the energy generation process. Furthermore, it can play a major role in comprehensive planning, operation, management, and cascade utilization of energy systems. It can also acts as a key technology to promote the energy market.

In this project you will use the historical data of monthly electricity consumption and forecast the demand for the coming months.

- **Data Description**

Monthly date

Consumption of energy

Project- NYC Taxi Trip Duration Prediction



Learning Objective



- Learning Objective:
Understand the importance of **Data Exploration**
Learn the power of **Feature Engineering** to improve your models.
Learn **implementation** of a Machine Learning Model Implementation
How to work with and create **Geospatial Features**
- Business Solving Similar Problems:
Uber, Lyft, Ola

Problem Technique and Statement



- **Problem Type:**

Regression

- **Problem Statement:**

Ride hailing services are services (like Uber, Ola) that use online-enabled platforms to connect between passengers and local drivers using their personal vehicles. In most cases they are a comfortable method for door-to-door transport. Usually they are cheaper than using licensed taxicabs.

To improve the efficiency of taxi dispatching systems for such services, it is important to be able to predict how long a driver will have his taxi occupied. If a dispatcher knew approximately when a taxi driver would be ending their current ride, they would be better able to identify which driver to assign to each pickup request.

Data Description



- **id** -
a unique identifier for each trip
- **vendor_id**-
a code indicating the provider associated with the trip record
- **pickup_datetime** -
date and time when the meter was engaged
- **dropoff_datetime** -
date and time when the meter was disengaged
- **passenger_count** -
the number of passengers in the vehicle (driver entered value)
- **pickup_longitude** -
the longitude where the meter was engaged
- **dropoff_longitude** -
the longitude where the meter was disengaged
- **dropoff_latitude** -
the latitude where the meter was disengaged
- **store_and_fwd_flag**
This flag indicates whether the trip record was held in vehicle memory before sending to the vendor(Y=store and forward; N=not a store and forward trip)
- **trip_duration** -
(target) duration of the trip in seconds

Project: Predict survivors from Titanic



Learning Objective, Problem Technique and Statement



- Learning Objective
Data Preprocessing
Implementing ML Models
- Technique:
Classification

- Problem statement:
The sinking of the Titanic is one of the most infamous shipwrecks in history. On April 15, 1912, during her maiden voyage, the widely considered “unsinkable” RMS Titanic sank after colliding with an iceberg. Unfortunately, there weren’t enough lifeboats for everyone onboard, resulting in the death of 1502 out of 2224 passengers and crew.

While there was some element of luck involved in surviving, it seems some groups of people were more likely to survive than others. The task is to build a predictive model to understand who is more likely to survive.

Data Description

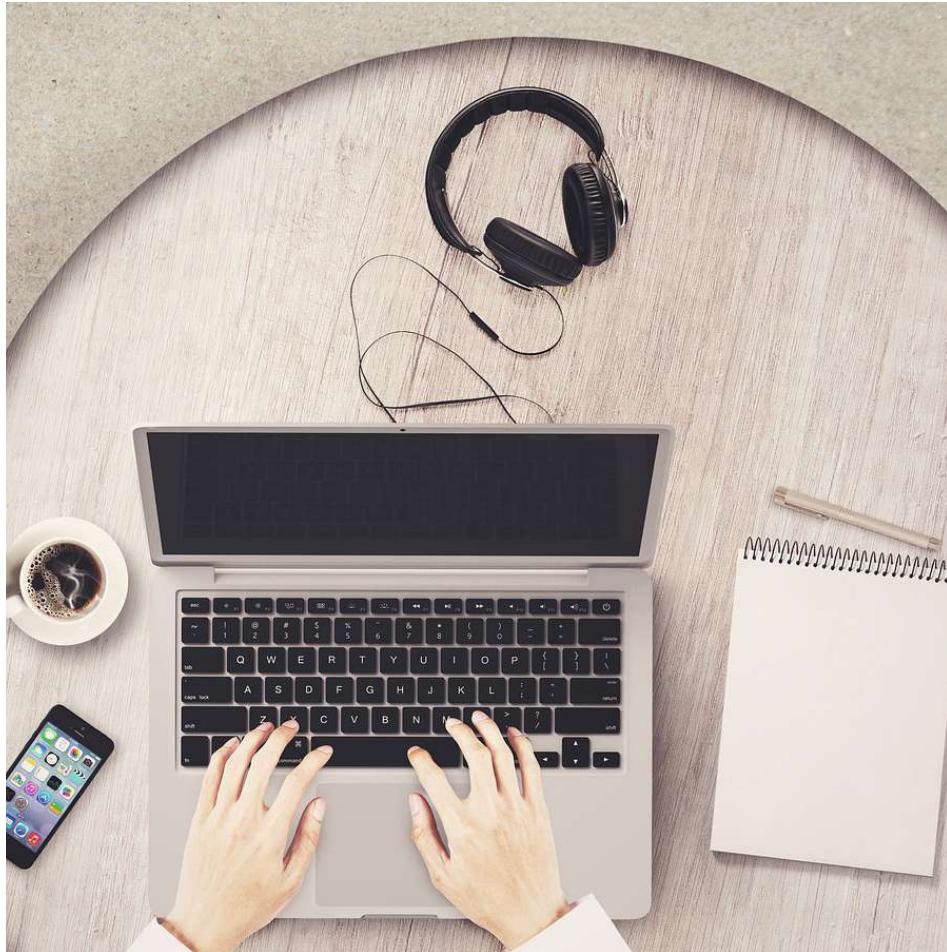


- pclass - Ticket class
- sex - Gender
- Age - Age in years
- sibsp - No of siblings / spouses aboard the Titanic
- parch - No of parents / children aboard the Titanic
- ticket - Ticket number
- fare - Passenger fare
- cabin - Cabin number
- embarked-
Port of Embarkation (C = Cherbourg, Q = Queenstown, S = Southampton)
- survival - Survival (0 = No, 1 = Yes)

Project: Forecasting Website Traffic (using Deep Learning)

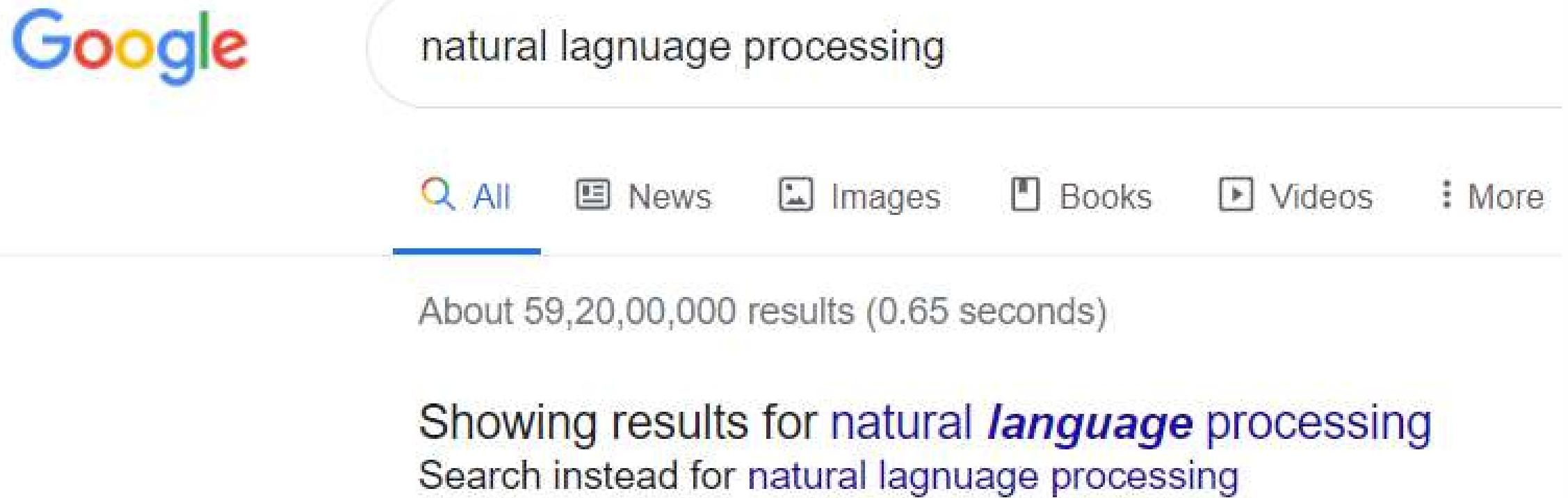


Learning Objective, Problem Type, Statement and Data Description



- **Learning Objective**
Using Deep Learning for time series forecasting
- **Problem Type**
Univariate Time Series
- **Problem Statement**
Web traffic refers to the number of sessions on the website in a given time period. Accurately estimating the web traffic can be useful for optimizing the publishing and advertising processes. In this project we will use the hourly data of web traffic and forecast the traffic for a web portal using deep learning.
- **Data Description**
Hour Index
of Sessions

Project: Auto Correct



A screenshot of a Google search results page. The search bar at the top contains the query "natural lagnuage processing". Below the search bar, there are six navigation links: "All" (highlighted with a blue underline), "News", "Images", "Books", "Videos", and "More". A horizontal line separates this from the search results. The text "About 59,20,00,000 results (0.65 seconds)" is displayed. Below this, a large blue link reads "Showing results for natural *language* processing". Underneath it, a smaller blue link says "Search instead for natural lagnuage processing".

Google

natural lagnuage processing

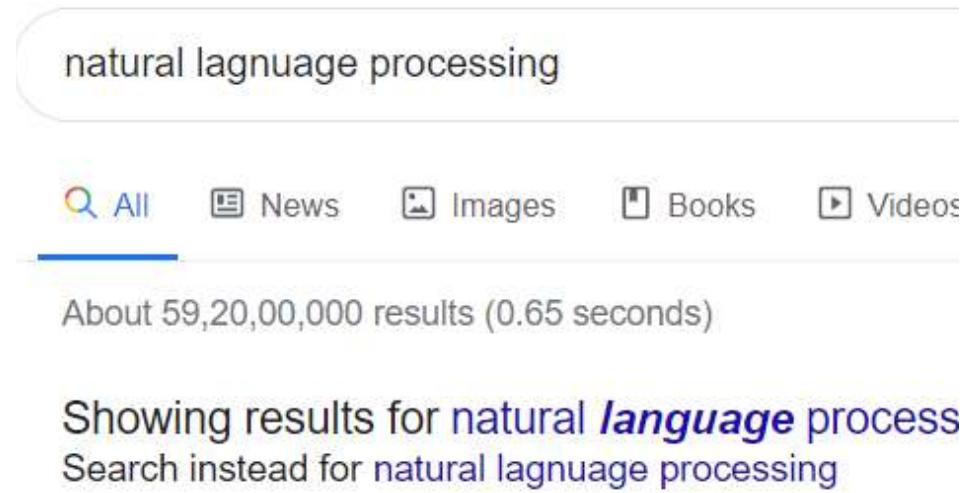
All News Images Books Videos More

About 59,20,00,000 results (0.65 seconds)

Showing results for natural *language* processing

Search instead for natural lagnuage processing

Learning Objective



- **Learning Objective**

Learn to work and pre-process text data

Building an end to end autocorrect model

- **Business Solving Similar Problems:**

Search Engines,
Messaging platforms

Project: Using Time Series Models for Sales Forecasting



Learning Objective, Problem type, Statement and Data Description



- **Learning Objectives:**
Using time series forecasting for sales forecast
Build machine learning model on time series
Time Series Forecasting models
- **Problem Type:**
Univariate Time Series

- **Problem Statement:**
SimpleBuy is a clothing company which has a variety of designs of clothes for every individual. The demand of their products is increasing and it often happens that the demand of products is more than the company's stock.
In order to prepare for the increasing demand, the company wants to plan the production process and stock raw material required for manufacturing. Thus we need to forecast the demand expected in the next six months.
- **Data Description:**
Date (dd-mm-yyyy)
Number of products sold

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