~@ pratikpatil
@dypup.pirnpri, pune

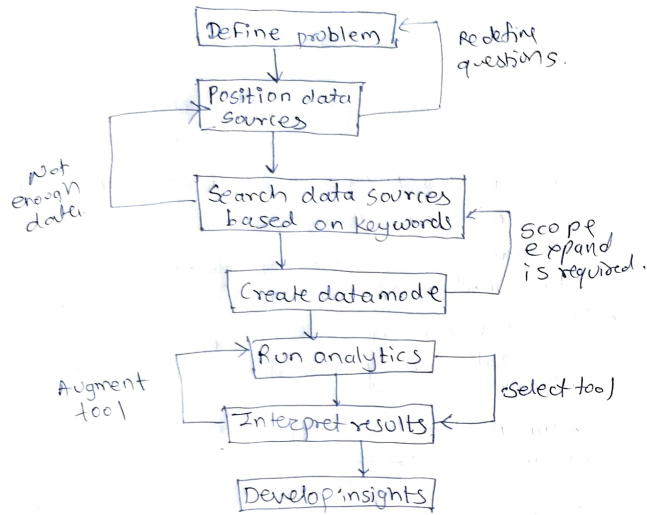**S]** What do you mean by social media analytics? Describe process of social media analytics.

→ • Social media Analytis refers to the process of collecting & analysing data from Socid media platforms like facebook, ~~google~~ Instagram, Twitter. linkedin, etc...) to get useful insights.

• This information can be used by/for buisness or organization or personal to get the useful insignt about data.

• Social media have two main sources of information ~~and that are~~ content (images, audios, feedbacks, product reviews, videos etc..) generated by users & the relationships between the entities of network (people, organization & product).

• The social media are categorized into two types.

1] Content based analytics

2] Structure based analytics.

1] In Content based analytics .analytics is performed on the content posted by the users on the social media platform. Such content is of high volume, noise, unstructured...

2] In Structure-based analytics ~~the~~ the focus is on the structural attributes of social network.

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            ┌──────────────────┐
            │ Define problem   │◄─────┐  Redefine
            └────────┬─────────┘      │  questions.
                     ▼
            ┌──────────────────┐
        ┌──►│ Position data    │
        │   │ sources          │
        │   └────────┬─────────┘
  Not   │            ▼
enough  │   ┌──────────────────┐
 data   └───│ Search data sources│◄───┐
            │ based on keywords  │    │ Scope
            └────────┬─────────┘      │ expand
                     ▼                │ is required.
            ┌──────────────────┐      │
            │ Create datamode  │──────┘
            └────────┬─────────┘
                     ▼
            ┌──────────────────┐
        ┌──►│ Run analytics    │
        │   └────────┬─────────┘
Augment │            ▼           Select tool
 tool   │   ┌──────────────────┐
        └───│ Interpret results│◄──
            └────────┬─────────┘
                     ▼
            ┌──────────────────┐
            │ Develop insights │
            └──────────────────┘
```

- It is the process of transforming raw data into insights, which ~~in turn leads~~ helps in building knowledge

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Q) What is text mining? Draw & explain text mining architecture & its use.

→ • Text mining is process of extracting useful information and patterns from unstructured textual data using techniques such as NLP, ML.

- It helps in converting large volume of texts. (eg, social media, news articles) into structures data for analysis & decision-making

Inputs		Output
		Pattern

Documents → Pattern (connections) Trends
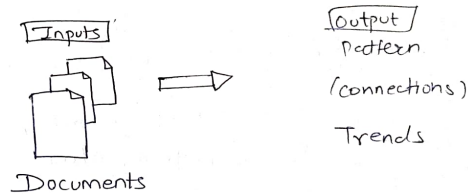
- General model is roughly divided into four parts.

(a) **preprocessing tasks.** → It includes all processes & methods required to prepare data for a text mining system's operations.

- Pre-processing tasks usually change the raw data into standard format, so that useful ~~is~~ feature can be extracted & the document can be represented clearly

(b) **Core mining Operations** → These is the heart of Text mining. system that includes pattern discovery, trend analysis, etc...

③ Presentation Layer → It includes Graphical user interface & pattern browsing f' as well as access to the query language. It also have feature. to show results visually.

④ Refinement Techniques → It includes the method that removes the redundant. data and if any group is similar than makes the cluster.

eg → ● A mobile company takes review from Amazon.

● They clean the text, remove extra words, & find out what people are talking about
● After analysis.
    ● most people like the battery & camera.
    ● some complains about price.
    ● 70% of reviews are positive.

This helps company to improve in specific area.

Q] Explain types of mobile analytics.

→ 1] Advertising /marketing Analytics.

→ ● This type of analytics is used to measure how well marketing & advertising campaigns are performing. for a mobile app.
● It helps ~~promot~~ developers & buisnessman to understand if the advertising is reaching to ~~ting~~ right person who will install & use app.
● Usually ads are shown ~~from~~ through the platforms like Google ads, ● Facebook Ads, site adds. etc.
● Developers set's the budget and then ads network shows their ads on the websites, apps or social media.

● Advertising/marketing analytics toacts data such as.
    ● Number of people who saw the ad.
    ● Number of people who clicked the ad
    ● Number of installs from ads.
    ● = ll =   registered or signup
    ● = ll   made purchase
    ● = ll   share the app.

● This data helps in future ad campaigns

2) In-App Analytics

- In-App analytics is used to track how users behave inside the app after they have installed it.
- It helps developers understand which parts of the app are being used the most & where users may face problem.
- This analytics Focuses on –
  - Which screens are visited most often.
  - Which features or buttons are used most.
  - How much time user spend in each section.
  - How user navigate through the app.
  - Where user leaves the app.
- It analyses which feature users like or ignore. So the app can be improved accordingly.
- It is very useful for improving UI or UX for making the app more easy to use.

3) Explain big data use cases

→ 1] Healthcare & medical research

→ Goal: Improve patient care, disease prediction.

Application
1] Stores and analyzes massive records.
2] Predicts disease like cancer, heart problem & diabetes using historical data.
3] Uses wearable devices to track health status
4] Real time monitoring of ICU patient using sensors
5] Tracks & predicts outbreaks.

2] Education & E-learning

→ Goal: Enhance learning outcomes & student performance.
1] Track student progress & predicts performance outcomes.
2] Analyse feed back for improvement
3] Coustmize learning plans for individual needs

2] Social media & Entertaiment

1) Analyzes user interactions (likes, share, comments) to study sentiment
2) Recommends content based on user prefrences
3) Detect fake news.
4] Track trending topics.

4) Smart Cities

→ 1) Traffic & parking management wing GPS & sensor data
2) Crime detection using CCTV & pattern recognition
3) Monitors pollution & energy usage

Q] Explain in brief data analytics life cycle.

→ **Q1 → UNIT-4**

Q] Explain Michael Porter's Analytical tool.

→ Porter's five forces model help analyze the competitive environment of an industry.

1) Competitive ~~Jealousy~~ Jealousy :→
   - This mean the level of competition between companies in the same market
   - The company often fights with other companies who gives same service or same product
   - This results in giving offers, discount, better prices & ~~adv~~ advertising
   - eg → 1) pepsi vs coco-cola
     2) BMW vs ~~Benz~~ Mercedes.

2] Power of supplier

- This refers to ability of supplier to control prices or quality of material
- If only few suppliers are available, they can charge more.

3] Power of buyers →

- This is influence the customers have on pricing and quality
- If buyers have many choices, they can ask for discount or better quality.
- Buisness must listen to customers & offer more value.

4) Threat to substitutes :→

- New technology can replace existing one.
- If better or cheaper product comes into the market Customer might switch.
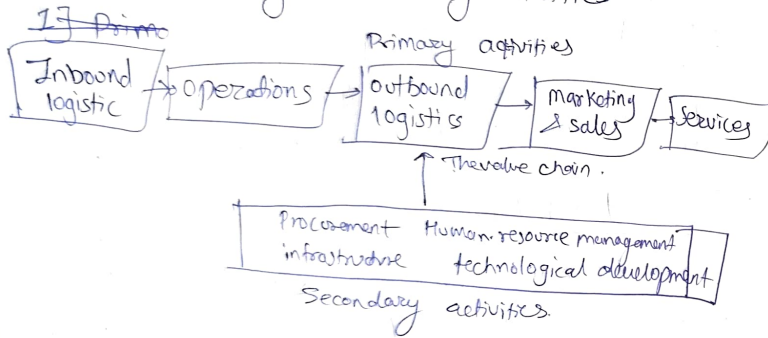- Companies must keep updating & innovating their products.

5) New Market Entrance :→

- New buisness can come in market and take away buisness.
- If it is easy to start a new company in a field, Competition becomes high.
- Existing Companies must build Customer trust.

Porter's Value chain analysis

- Porter's value chain analysis to explain. how a company creates value through its internal activities.

The activities are majorly divided into two types ie, primary & secondary activities.

1] Prim

Primary activities

Inbound logistic → operations → Outbound logistics → Marketing & sales → Services

↑ The value chain.

Procurement   Human resource management
infrastructure   technological development

Secondary activities.

a] Primary activities

1] Inbound logistics → Involves receiving, storing & distributing raw materials

2] operations. → All activities process that transforms input into output.

3] Outbound logistics → Activities including storing & delivering product.

4] Marketing & sales → Activities that promotes & sell the product.

5] Service. → Maintainance.

Secondary activities —

1] procurement → purchasing raw materials, tools.

2] Human Resource management → Hiring, training.

3] Infrastructures → Company's management, planning etc.

4] Technology development → Innovation, etc...

9] Explain big data analytics challenges

→ 1] Data volume

2] Data variety.

3] Data velocity.

4] Data veracity.

5] Data Security & privacy

6] Data integration.

7] Cost & Infrastructure.