Unleashing the Power of Analytics for App Product Success
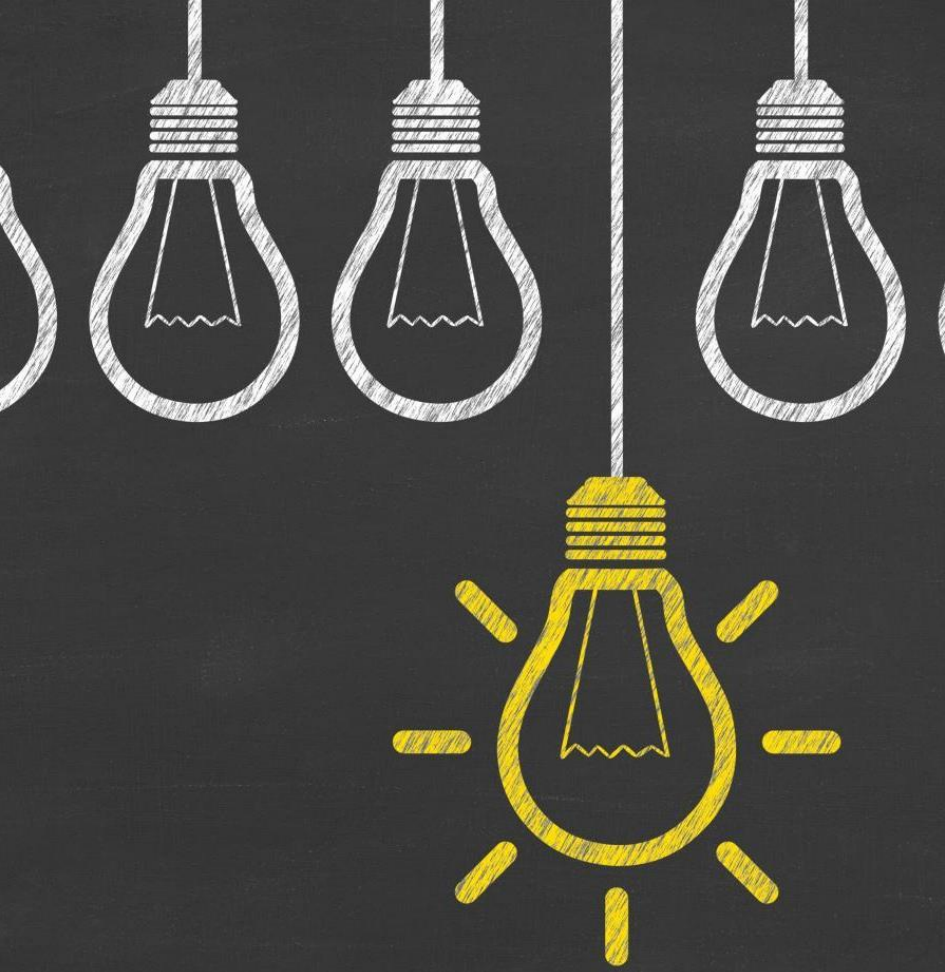
Seminary 6

Content

- Examples of Analytics Platforms
- Leveraging Analytics for App Growth
  - Funnel Analysis
  - User Flow
  - Cohort Analysis
  - Predictive Analytics
  - A/B Testing and Experimentation
  - Play Time
- Next Milestone

DATA DRIVEN INNOVATION

- use of **data** to create value and r**each new horizons** is called **data-driven innovation**

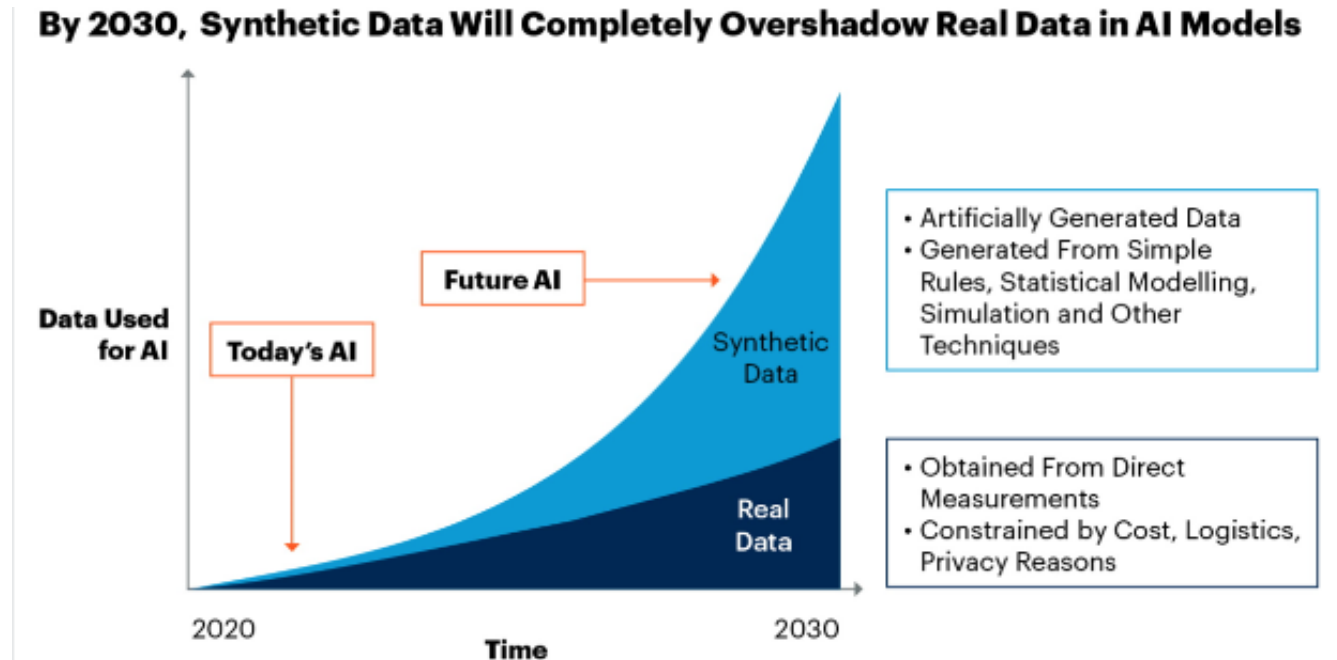- enabling **value creation** and the development of new industries, products, and processes

Explaining analysis & insights

Extract **business insights:**

o Why did sales decrease?

o Where the users mostly stops?

o Best options for user acquisition?

Create **synthetic data**:

o Test different models with a lot of data

o Automatic data imputation

By 2030, Synthetic Data Will Completely Overshadow Real Data in AI Models

Data Used for AI

Today's AI

Future AI

Synthetic Data

Real Data

- Artificially Generated Data
- Generated From Simple Rules, Statistical Modelling, Simulation and Other Techniques

- Obtained From Direct Measurements
- Constrained by Cost, Logistics, Privacy Reasons

2020   Time   2030

Source https://ww3.math.ucla.edu/announcements_ugrad/ucla-synthetic-data-workshop/

Analytics Platforms

- **Microsoft Power BI**: Best for data visualization

- **Tableau**: Best for business intelligence (BI)

- **Qlik Sense**: Best for machine learning (ML)

- **Looker**: Best for data exploration

- **Klipfolio**: Best for instant metrics

- **Zoho Analytics**: Best for robust insights

- **Domo**: Best for streamlining workflows

- **Sisense**: Best for integrated analytics solutions

- **Google Analytics**: Best for web traffic insight

- **SAP Analytics Cloud**: Best for enterprise performance management

Source https://www.forbes.com/advisor/business/software/best-data-analytics-tools/
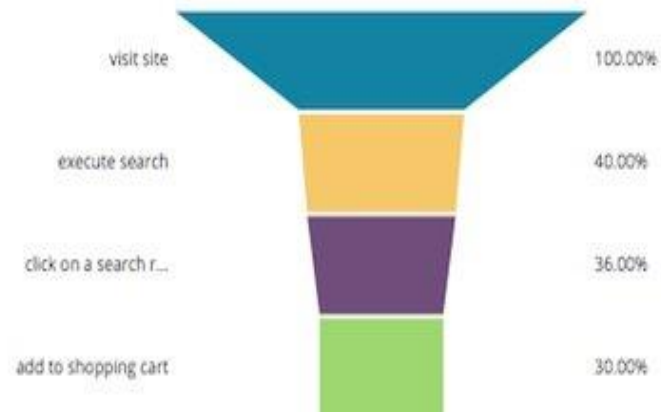
Funnel Analysis

- understand the **flow of users** through the website/app
- shows you where your **users are dropping off**
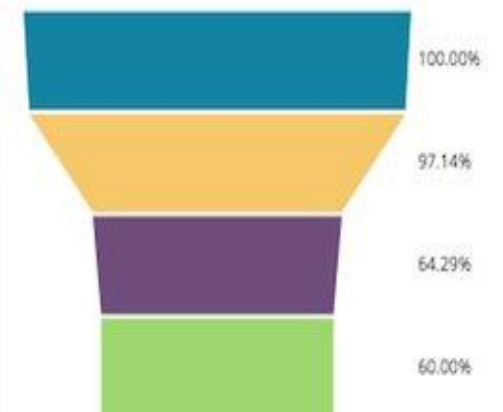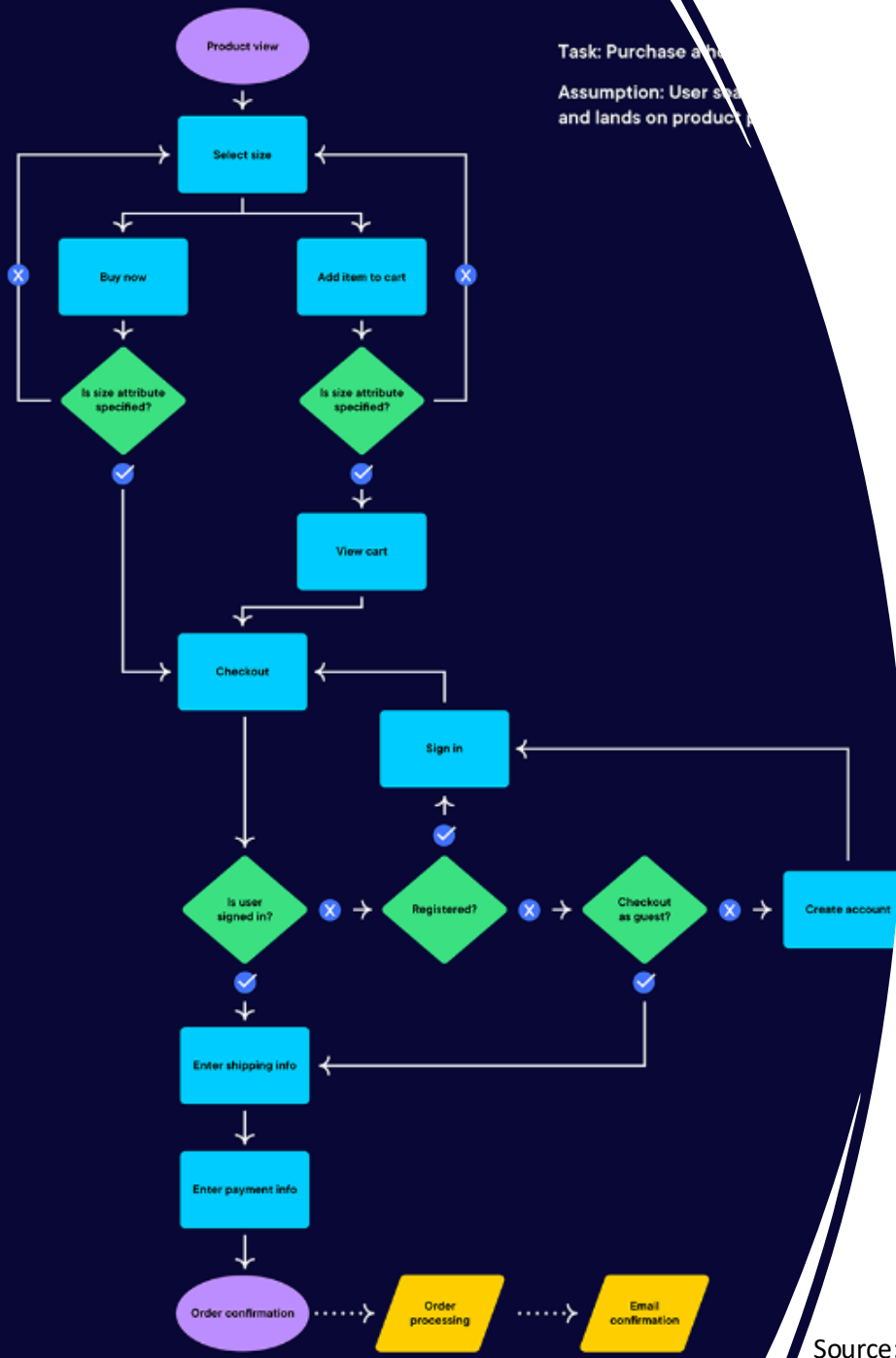   - o from visiting to adding an item to the shopping cart

Funnel Analysis - Example

Task: Purchase a...

Assumption: User se...
and lands on product...

User Flow

- an **examination of interactions** describing ideal or typical **steps** needed to achieve a common **task**

- allows teams to make **design improvements** by focusing on the paths toward achieving goals and understanding **the friction points** important to monitor user flow

- **importance** to monitor the user flow
    - Understand user behavior
    - Visualize UX (how elements from pages are working together)
    - Conversion optimization: focus on the pivotal points on the user journey
    - Identify the *Happy Path*

Cohort Analysis

- Comparing how **different groups** of customers act over time
- A cohort is a specific group of people with a **shared** characteristic or criteria:
    - First product bought
    - Channel they came
    - Demographics: age, location, …
- Used to analyze:
    - buying patterns, conversion trends, product popularity
    - Compare add campaigns with different attributes

Cohort Analysis - Example

	0	1	2	3	4	5	6	7	8	9	10	11	12
Jan-20	256	106	79	60	30	22	17	25	5	2	2	1	3
Feb-20	165	47	35	26	13	10	18	7	4	3	2	0	
Mar-20	146	53	40	30	15	23	9	5	1	0	0		
Apr-20	121	18	14	10	19	7	5	1	3	2			
May-20	78	30	22	24	13	10	7	1	0				
Jun-20	72	17	28	12	6	5	3	1					
Jul-20	86	24	18	14	10	5	4						
Aug-20	98	18	14	10	5	4							
Sep-20	112	19	15	11	5								
Oct-20	146	34	26	19									
Nov-20	198	53	39										
Dec-20	204	72											
Jan-21	223												

- **eCommerce store**
- First column is the number of customers that made a first-time purchase **each month**
- The following columns show how many customers also made **another purchase**, and in which month
- Observation:
  o a big drop in numbers for most months between columns **three and four** (sudden change in shading between those columns)
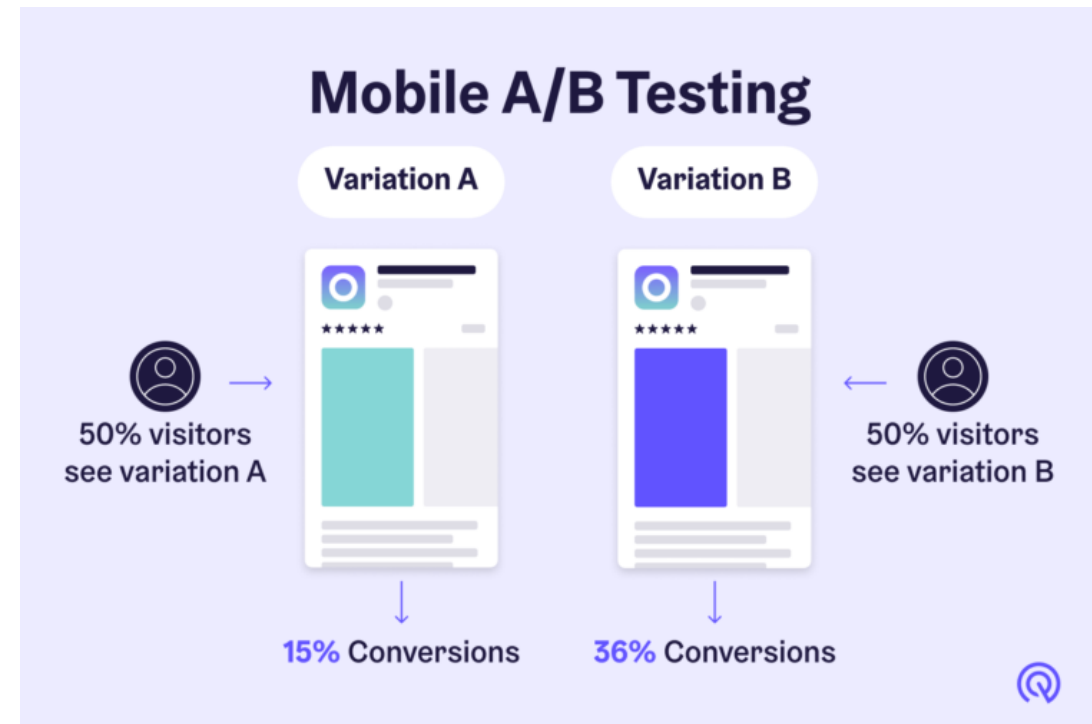
Predictive Analytics

- The process of using data to **forecast** future outcomes
- Steps:
  - o Define the problem
  - o Acquire and organize data
  - o Pre-process data: remove anomalies, missing data
  - o Develop predictive models: ML, regression models, decision trees, NN
  - o Validate and deploy: make available to stakeholders
- Ex: GPT Analytics

A/B Testing and Experimentation

- A/B testing (also known as split testing or bucket testing) is a methodology for comparing **two versions** of a webpage or app against each other to determine which one **performs better**.

- You keep your current version of the app store listing and create another variation **to test one specific aspect**

Mobile A/B Testing

Variation A   Variation B

50% visitors see variation A   50% visitors see variation B

15% Conversions   36% Conversions

Source: https://appradar.com/academy/app-store-listing-a-b-testing

A/B Testing - Steps

- **Research**. What is missing in your app? Keep an eye on the competitors.

- **Hypothesis** "If I change the app icon, we'll get more downloads"

- **Create your variations** Create the new icon, design new search button

- **Running the experiment** Never run the experiments less than 7 days

- **Analysis and implement** Collect data: traffic, conversions, engagement, rate, retention rate, etc.

… and make decisions

Google analytics example

https://console.firebase.google.com/

Google Analytics

# Play time

Conversion Journey Game

- Create **4 teams**:
  - Marketing Department (Awareness to Interest)
  - Product Development/UX Design (Interest to Consideration)
  - Sales/Conversion Optimization Team (Consideration to Purchase)
  - Customer Success/Support (Purchase to Retention)
- Propose **3** solutions.
- Each jury member (2+1) selects **6** (from 12) **solutions**.
- If a solution receives **>= 3** votes it passes.
- The team with most of the solutions passed **wins (+1 milestone point, or 0.5 if tied)**

Awareness (100%)

Interest (70%)

Consideration (50%)

Purchase (30%)

Retention (20%)
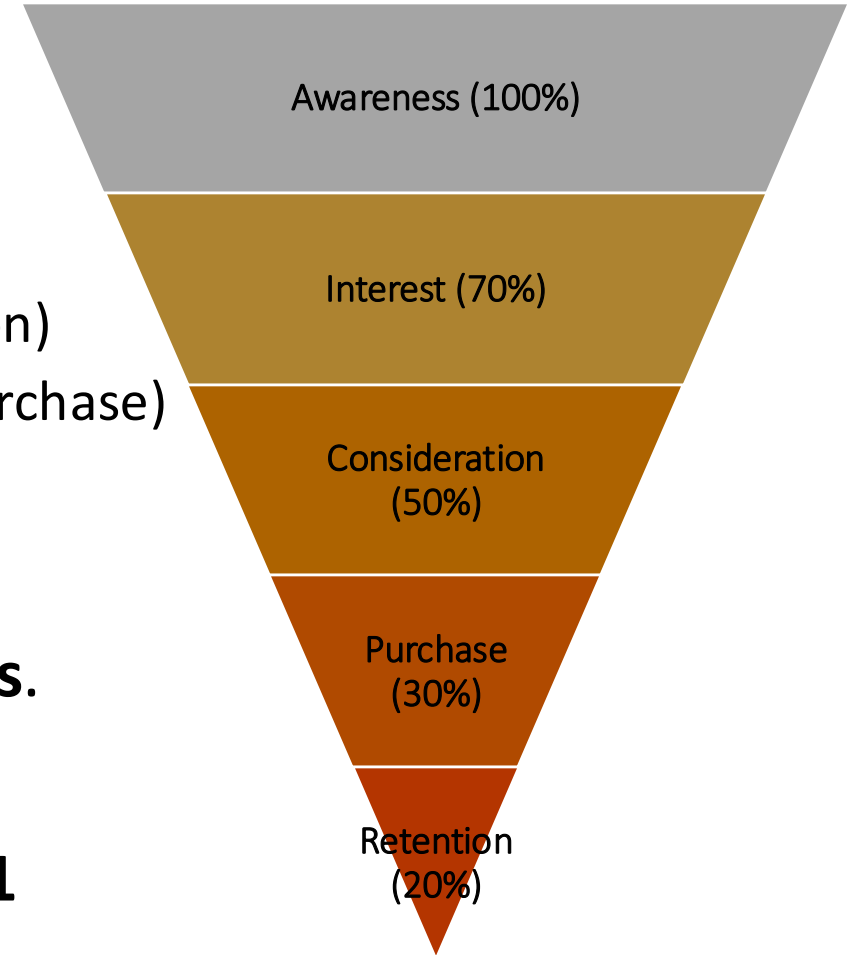
Jury

- Is it relevant for the chosen **segment**
- Is it **cost** effective
- it is **possible** to implement
- Uses **analytics**

Conversion Journey Game

- Etsy https://www.etsy.com
  - o Marketplace for handmade, vintage items, and unique factory-manufactured items.

- Duolingo www.duolingo.com
  - o Language learning.

- Too Good To Go https://www.toogoodtogo.com
  - o Reducing food waste by connecting users with surplus food from restaurants.

- Expedia https://www.expedia.com
  - o Travel booking and planning.

- Kiva https://www.kiva.org
  - o Crowdfunding loans for underserved communities.

Examples: MyFitnessPal

- Marketing Department (Awareness to Interest)
    - *Track engagement on blog articles, videos, or social posts. Identify high-performing content topics to replicate and boost awareness*

- Product Development/UX Design (Interest to Consideration)
    - *Track which features potential users explore the most during their trial period*

- Sales/Conversion Optimization Team (Consideration to Purchase)
    - *Identify users who drop off at the payment stage using tools like Amplitude or Firebase Analytics. Implement email or push notifications*

- Customer Success/Support (Purchase to Retention)
    - *Build dashboards to monitor key metrics such as daily active users (DAU) and feature engagement. Use these insights to develop strategies for feature promotions or updates.*

Wrap-Up
Innovation using Data

- **Personalization** and Customer Experience (making the product more appealing and relevant)

- **Predictive Analytics and Forecasting** (anticipating customer needs)

- **Optimized Product Development** (enables rapid, informed iteration of products)

- **Market Segmentation and Targeting** (creation of new products or variations of existing products)

Milestone 6
-week 12-

- One page PDF to design an **A/B testing** process
  - Research
  - Hypothesis
  - Versions
  - Metrics
  - How do you deploy the 2 versions in parallel?

References:

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