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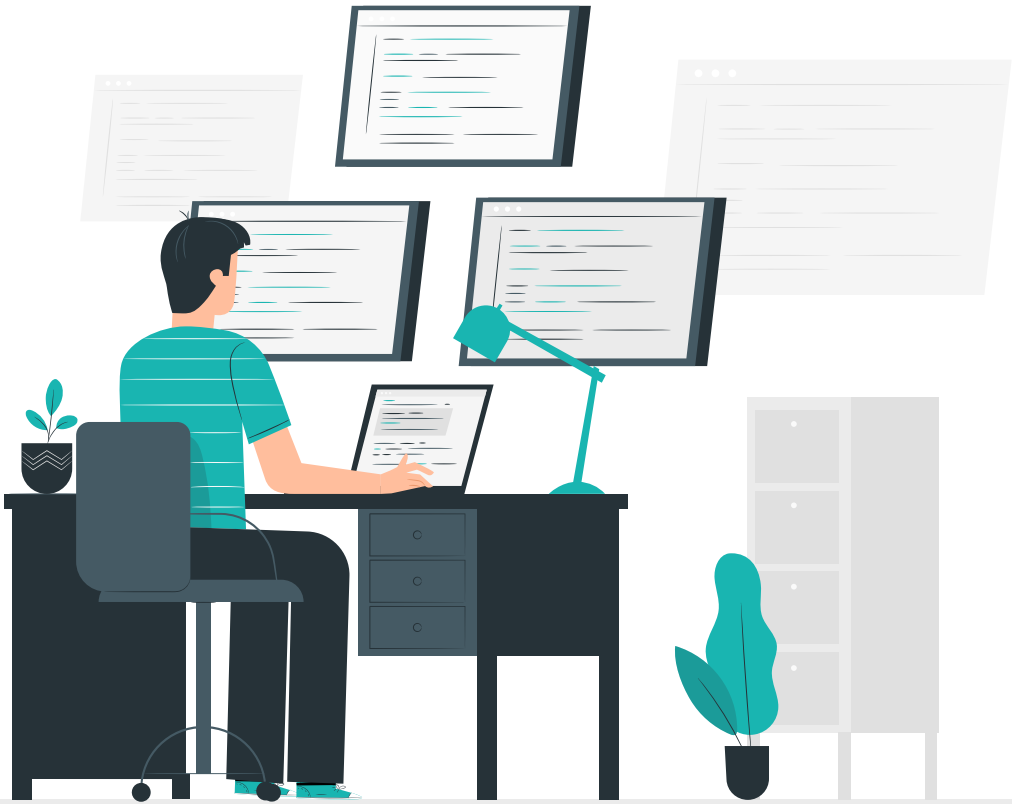
CUSTOMER PURCHASE PREDICTION

Using Machine Learning models to predict user behaviour



ME781 DATA MINING/**GROUP 3**
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170040106 BAVISH K
193100008 JAYKUMAR GUPTA
180100029 BURRA SRIHITH BHARADWAJ
150040010 TANYA GUPTA

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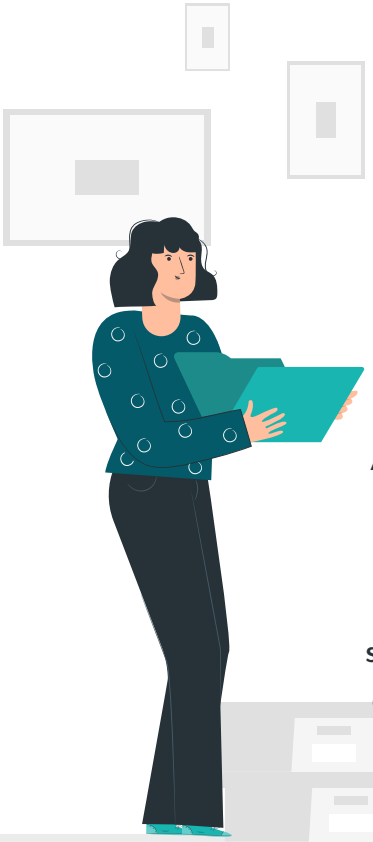
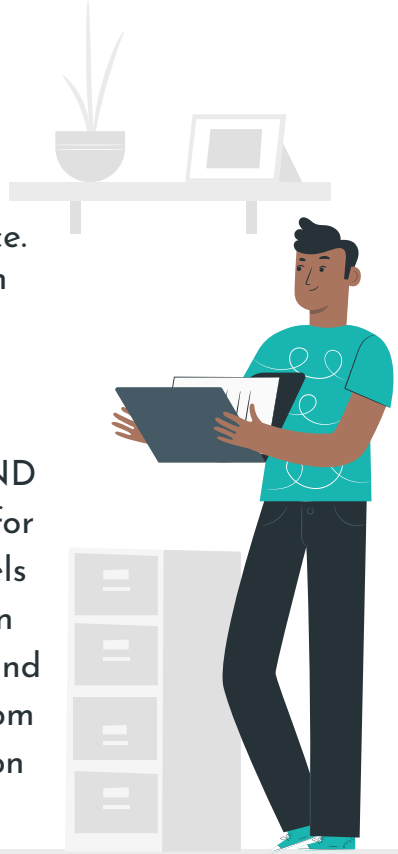
PROJECT OBJECTIVE



COVID-19 has accelerated the transition from visiting physical stores to online shopping. Predicting customer behavior in the context of e-commerce is gaining importance. It can increase customer satisfaction and sales, resulting in higher conversion rates and a competitive advantage, by facilitating a more personalized shopping process.

At ***PREDICT.AI***, we aim to HELP GROWING STARTUPS AND BUSINESSES utilize their customer data and build models for PREDICTING CUSTOMER BEHAVIOUR.. Comparing models will give further insight into the performance differences on static customer data. Conducting descriptive data analysis and data visualisation will help our clients extract more value from data and make decisions to boost their customer satisfaction



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PROJECT DEFINITION

UNIQUE SELLING PROPOSITION & PROTECTION OF USP

1. Easy to use software
2. Domain experts help
3. High accuracy models
4. Data protection and privacy
5. Branding of USP
6. AI Chatbot for support

BARRIER TO ENTRY & EXISTING PRODUCTS/SERVICES

1. Companies not wanting to share data
2. Companies building their own AI Teams
3. Google Analytics
4. Point Defiance Zoo
5. Aquarium
6. NTENT

CUSTOMER REQUIREMENTS

1. Accurate models
2. User satisfaction
3. Increasing revenue/campaign
4. 24/7 Help and support

BUSINESS CASE

1. Target startups and small businesses
2. Publish conclusions from publicly available data
3. Subscription model like Bloomberg for companies
4. Testimonials and references from satisfied clients

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TECHNOLOGY LANDSCAPE ASSESSMENT

01

Patents

- Jivox Kairos™
- Predictive Intent Segments by Acxiom and AmEx

02

Published Literature

1. Cirqueira D., Hofer M., Nedbal D., Helfert M., Bezbradica M. (2020). "Customer Purchase Behavior Prediction in E-commerce: A Conceptual Framework and Research Agenda." *Lecture Notes in Computer Science*, vol 11948. Springer, Cham.
2. Kumar, A., Kabra, G., Mussada, E.K. et al. "Combined artificial bee colony algorithm and machine learning techniques for prediction of online consumer repurchase intention." *Neural Comput & Applic* 31, 877–890 (2019)
3. Dennis Koehn, Stefan Lessmann, Markus Schaal,"Predicting online shopping behaviour from clickstream data using deep learning",*Expert Systems with Applications*,*Volume* 150,2020,113342.
4. Chen, Zhen-Yu, and Zhi-Ping Fan. "Distributed customer behavior prediction using multiplex data: a collaborative MK-SVM approach." *Knowledge-Based Systems* 35 (2012): 111-119.

03

Open Libraries

- NumPy
- Pandas
- SciKit-Learn
- Matplotlib
- Seaborn
- Plotly
- Pydot
- XGBoost
- Unittest/pytest

No proprietary libraries needed*

GANTT CHART

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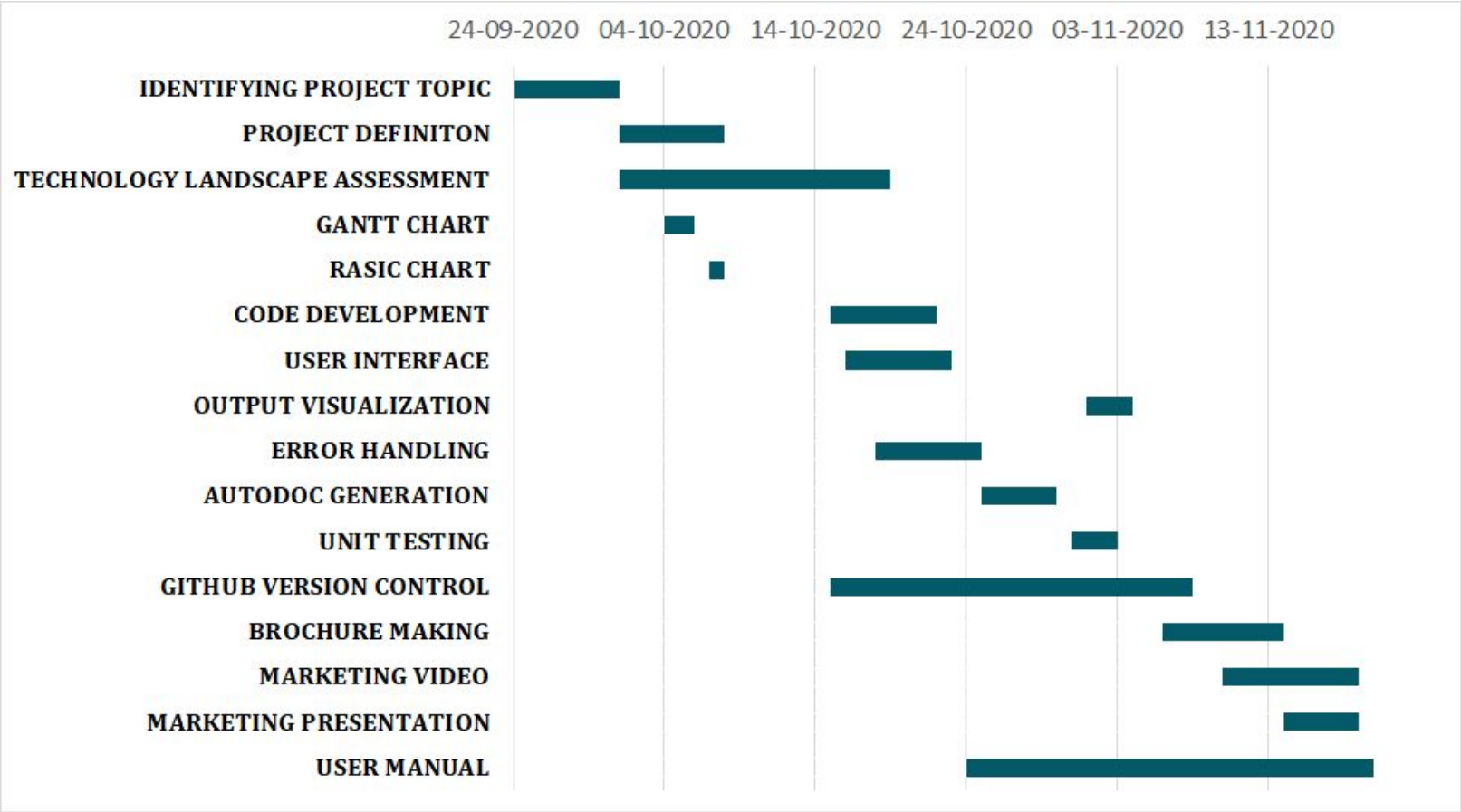

RASIC CHART

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Tasks \ People	MUDIT	BAVISH	JAY	SRIHITH	TANYA
OBJECTIVE AND DEFINITION	A	A	S	S	R
TECHNOLOGY LANDS-CAPE ASSESSMENT	R	S			S
PLANNING - TIMELINE, GANTT, RASIC CHARTS	A	A	A	A	R
CONCEPTUAL DESIGN - MODEL/DATASET SELECT	A	A	R	S	A
CODE DEVELOPMENT PHASE 1		R	S	S	
CODE DEVELOPMENT PHASE 2	S	R		S	S
MARKETING BROCHURE, PRESENTATION, VIDEO	S		S		R
USER MANUAL & PROJECT REPORT	S	S	S	R	S