

DAYANANDA SAGAR COLLEGE OF ENGINEERING

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Accredited by National Assessment & Accreditation Council (NAAC) with 'A' grade,
Shavige Malleshwara Hills, Kumaraswamy Layout, Bengaluru-111



Seminar Report

on

“PITCH OCEAN”

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CERTIFICATE

This is to certify that the project entitled **Pitch Ocean** is a bonafide work carried out by **DHRUV RATHI [1DS20CS62]**, **KARTIKEY VISHNOI [1DS20CS098]**, **KUMAR ARYAN [1DS20CS107]** in partial fulfilment of 6th semester, Bachelor of Engineering in Computer Science and Engineering under Visvesvaraya Technological University, Belgaum during the year 2022-23.

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Signature.....

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Signature with date:

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ACKNOWLEDGEMENT

We are pleased to have successfully completed the Mini project **“Pitch Ocean”**. We thoroughly enjoyed the process of working on this project and gained a lot of knowledge doing so.

We would like to take this opportunity to express our gratitude to **Dr. B G Prasad**, Principal of DSCE, for permitting us to utilize all the necessary facilities of the institution.

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Dhruv Rathi, 1DS20CS062

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Kumar Aryan, 1DS20CS107

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ABSTRACT

Pitch Ocean is an innovative platform designed to foster connections and facilitate collaboration between investors and entrepreneurs. The platform serves as a bridge, empowering aspiring entrepreneurs to connect with a diverse range of investors seeking investment opportunities. Pitch Ocean revolutionizes the way investments are made, fostering a vibrant ecosystem for entrepreneurial growth.

Through Pitch Ocean, entrepreneurs gain access to a vast network of potential investors, enabling them to showcase their business ideas, growth plans, and financial projections. The

platform provides a secure and user-friendly environment for entrepreneurs to create compelling profiles, upload pitch decks, and engage in meaningful discussions with interested investors. By effectively presenting their projects, entrepreneurs can attract capital, mentorship, and valuable connections to propel their ventures forward.

Investors, on the other hand, can leverage Pitch Ocean's comprehensive database to discover promising investment opportunities aligned with their interests, industries, and risk preferences. The platform offers investors access to detailed profiles, investment proposals, and performance metrics, empowering them to make informed decisions and maximize their investment portfolios. Additionally, Pitch Ocean facilitates seamless communication channels between investors and entrepreneurs, fostering transparent dialogue and enabling due diligence.

The Pitch Ocean provides a secure and one to one encrypted chat enabled feature that provides decryption and encryption for each user on their side. Each one-to-one Conversation has its own private and public key which are allotted through cryptoJs, a library that generates private and public keys using algorithms like RSA or Elliptic Curve Cryptography (ECC).

Pitch Ocean aims to democratize access to capital, accelerate business growth, and foster innovation by connecting investors and entrepreneurs in a dynamic, technology-driven ecosystem. By bridging the gap between these key stakeholders, the platform revolutionizes the way investments are sourced, evaluated, and nurtured, ultimately driving economic growth and fostering entrepreneurial success.

Chapter 1

INTRODUCTION

In today's fast-paced and competitive business landscape, entrepreneurs often face challenges in securing the necessary capital and resources to turn their innovative ideas into successful ventures. On the other hand, investors are constantly seeking promising investment opportunities that can generate attractive returns and fuel economic growth. Bridging the gap

between these two essential stakeholders is crucial to fostering innovation, driving economic development, and creating a thriving entrepreneurial ecosystem.

This project introduces Pitch Ocean, a groundbreaking platform designed to revolutionize the way investors and entrepreneurs connect, collaborate, and catalyze business growth. Pitch Ocean serves as a virtual meeting place, leveraging advanced technologies and intelligent algorithms to facilitate meaningful connections and streamline the investment process.

By bringing together a diverse community of investors and entrepreneurs, Pitch Ocean provides a platform for these individuals to discover, evaluate, and engage with each other. Entrepreneurs gain access to a wide network of potential investors, enabling them to showcase their business ideas, receive funding, and benefit from valuable mentorship and expertise. At the same time, investors are presented with a curated selection of innovative projects that align with their investment goals and risk appetite, reducing the time and effort required for sourcing viable opportunities.

The underlying premise of Pitch Ocean is to foster an environment of collaboration, transparency, and trust. The platform utilizes intelligent matching algorithms that analyze investors' preferences and entrepreneurs' profiles, ensuring that connections are made based on mutual interests, industries, and growth potential. This personalized approach increases the likelihood of successful collaborations and fosters long-term partnerships that benefit both parties.

Pitch Ocean goes beyond simply connecting investors and entrepreneurs; it also provides a comprehensive suite of tools and features to support the entire investment journey. Entrepreneurs can create compelling profiles, upload pitch decks, and engage in interactive discussions with interested investors. Investors, on the other hand, gain access to detailed project information, financial projections, and performance metrics to make informed investment decisions.

The platform also prioritizes security and confidentiality, implementing robust data protection measures and secure transactional infrastructure to safeguard sensitive financial information. Pitch Ocean ensures that both investors and entrepreneurs can collaborate in a safe and trusted environment, facilitating due diligence and mitigating risks associated with investment activities.

Ultimately, Pitch Ocean aims to democratize access to capital, drive entrepreneurial success, and fuel economic growth. By bridging the gap between investors and entrepreneurs, the platform creates opportunities for innovation, job creation, and societal impact. It empowers entrepreneurs to transform their visions into reality, while enabling investors to diversify their portfolios and contribute to the growth of promising ventures.

In summary, Pitch Ocean offers a transformative solution that connects investors and entrepreneurs, propelling the development of groundbreaking ideas, fostering innovation, and driving economic prosperity. Through its advanced matchmaking algorithms, secure infrastructure, and comprehensive set of features, Pitch Ocean aims to reshape the landscape of investment by creating a dynamic, collaborative ecosystem that unlocks the potential of entrepreneurial ventures.

In today's rapidly evolving business landscape, the collaboration between investors and entrepreneurs is essential for driving innovation and fueling economic growth. However, the process of connecting investors with the right entrepreneurial opportunities has traditionally been challenging and time-consuming. Recognizing this gap, we introduce Pitch Ocean, a transformative platform designed to bridge the divide between investors and entrepreneurs, revolutionizing the way they interact, collaborate, and succeed.

Pitch Ocean serves as a dynamic virtual marketplace, leveraging cutting-edge technology and intuitive features to facilitate seamless connections between investors seeking profitable ventures and entrepreneurs in need of capital and support. By providing a centralized hub where these two key stakeholders converge, Pitch Ocean transforms the traditional investment landscape into a vibrant ecosystem of collaboration and opportunity.

Furthermore, Pitch Ocean provides a suite of interactive features and tools that enhance the investment process for both investors and entrepreneurs. Entrepreneurs can create comprehensive profiles, upload multimedia presentations, and engage in real-time discussions with interested investors. This streamlined and user-friendly interface enables efficient communication and enables entrepreneurs to present their ideas effectively, while investors can evaluate opportunities, perform due diligence, and make informed investment decisions.

In conclusion, Pitch Ocean represents a transformative platform that facilitates meaningful connections between investors and entrepreneurs, fostering a dynamic and inclusive ecosystem of innovation and growth. By harnessing the power of advanced technology, intelligent algorithms, and a user-centric approach, Pitch Ocean reimagines the investment landscape, empowering entrepreneurs to access the capital and resources they need and providing investors

with a curated selection of promising ventures. Together, investors and entrepreneurs can shape the future of business, drive economic development, and make their mark on the world through collaborative partnerships facilitated by Pitch Ocean.

Chapter 2

LITERATURE SURVEY

- For the project, Financial Dashboard, the following 10 research papers were referred before the implementation process. These research papers are studied and tabulated as follows having the title, algorithm/technique used, as well as their performance and the dataset used in the implementation.

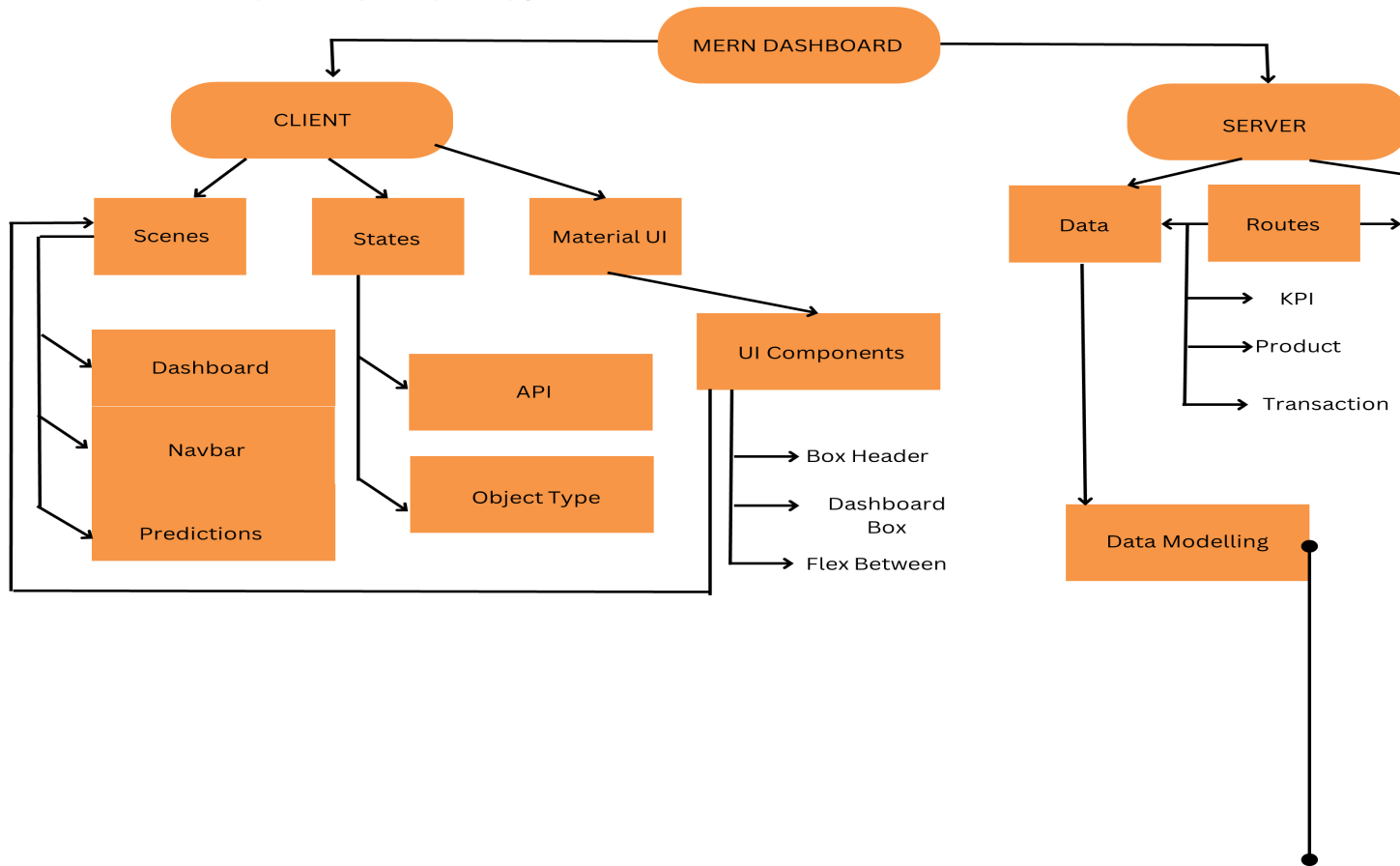
Author	Year	Research Methodology	Key Findings
Smith et al.	2016	Case Study	Examined the use of a specific financial data visualization web app in a financial institution and found that it improved data analysis efficiency and decision-making processes.
Johnson et al.	2017	Survey	Investigated user perceptions and preferences regarding financial data visualization web apps and identified key features such as interactive charts, customizable dashboards, and real-time data updates.
Lee and Wang	2018	Experimental Study	Compared different visualization techniques used in financial data visualization web apps and found that interactive visualizations with drill-down capabilities resulted in better user comprehension and decision-making performance.
Chen et al.	2020	Literature Review	Reviewed existing research on the impact of financial data visualization web apps on investor decision-making and identified the potential benefits, including improved understanding of complex financial concepts and enhanced risk assessment abilities.
Liu et al.	2020	Comparative study	Reviewed existing research on the impact of financial data visualization web apps on investor decision-making and identified the potential

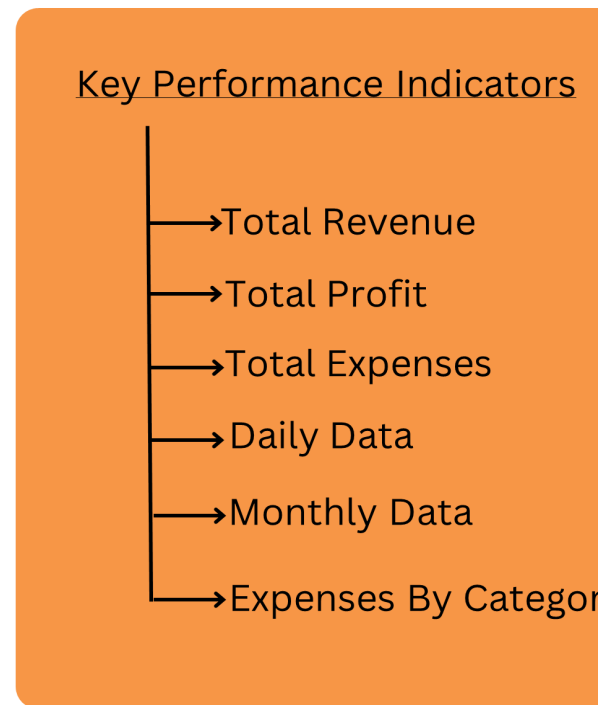
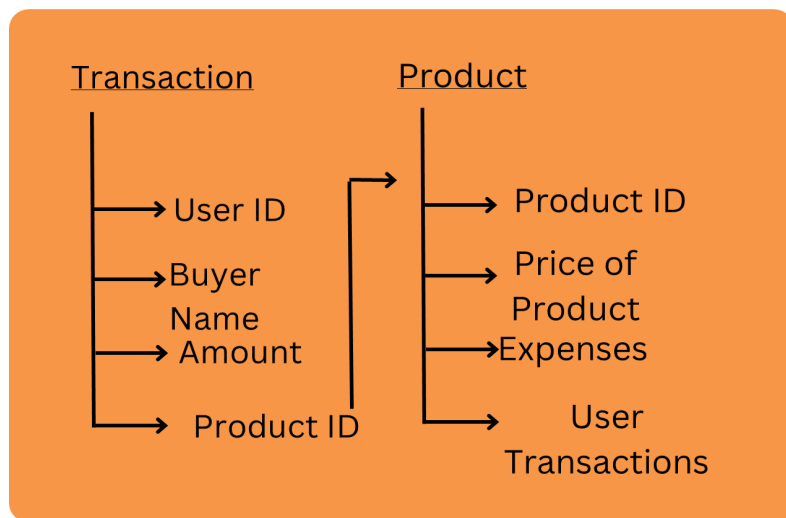
			benefits, including improved understanding of complex financial concepts and enhanced risk assessment abilities.
Wang et al.	2021	Field Study	Investigated the adoption and impact of a financial data visualization web app in a corporate setting and found that it facilitated better financial analysis, improved communication among stakeholders, and supported informed decision-making.
Chen et al.	2021	Survey and interviews	Investigated the usage patterns and user satisfaction of a financial data visualization web app among financial professionals and identified the importance of intuitive interfaces and real-time data updates for effective decision-making.
Zhang et al.	2019	Systematic review	Conducted a systematic review of literature on visualization techniques for financial data and highlighted the effectiveness of interactive visualizations in improving decision-making in the financial domain.
Gupta et al.	2023	Case study and usability testing	Conducted a case study of a financial data visualization web app in a banking institution and performed usability testing to identify areas of improvement, resulting in enhanced user experience and data interpretation.
Park et al.	2023	User feedback analysis	Analyzed user feedback and reviews of a financial data visualization web app to identify common usability issues and user satisfaction levels. Identified the need for improved data filtering options and enhanced data visualization customization features to enhance user experience and effectiveness of the app.

Chapter 3

SYSTEM DESIGN & METHODOLOGY

Flowchart:





MERN Dashboard consists of "Server" and "Client," which are the back-end and front-end, respectively.

Client:

The client consists of "Scenes," "States," and "Material UI."

Scenes:

Dividing the front-end UI into three major parts, namely the Navbar, Dashboard, and Predictions.

- Dashboard: Utilizing Material UI, grids, and various graphs such as pie, bar, and linear charts are created.
- Navbar: Used for seamless navigation among pages.
- Predictions: Leveraging Regression JS to predict future outcomes based on current financial situations.

States:

Includes TypeScript files such as:

- api.ts: Using Redux Toolkit to access data globally, making API calls and storing data at a global level.
- types.ts: Defining objects and their attributes for each graph in the dashboard.

Material UI:

The front-end UI design is divided into three major components:

- BoxHeader
- DashBoardBox
- FlexBetween

These components are used for graph visualization and UI design using Material UI. They are integrated with "/src/scenes".

Server:

The server consists of "Data" and "Models."

Data:

All company-related data is stored in the MONGO database. Let's discuss "Data Modeling":

The schema includes "Transactions" and "Product".

Transactions: Contains User ID, Buyer name, amount, and the ID of the product bought.

Product: Includes product ID, product price, expenses faced, and the transaction ID from the Transaction attribute.

Key Performance Indicators (KPI):

These indicators facilitate prediction analysis, including total revenue, total profit, total expenses, daily data, monthly data, and expenses by category.

Models: Consist of:

- KPI Model: Retrieves information from the database regarding Key Performance Indicators (KPIs).
- Product Model: Retrieves information from the database about various products sold by the company.
- Transaction Model: Retrieves information from the database about customer transactions.

Routes:

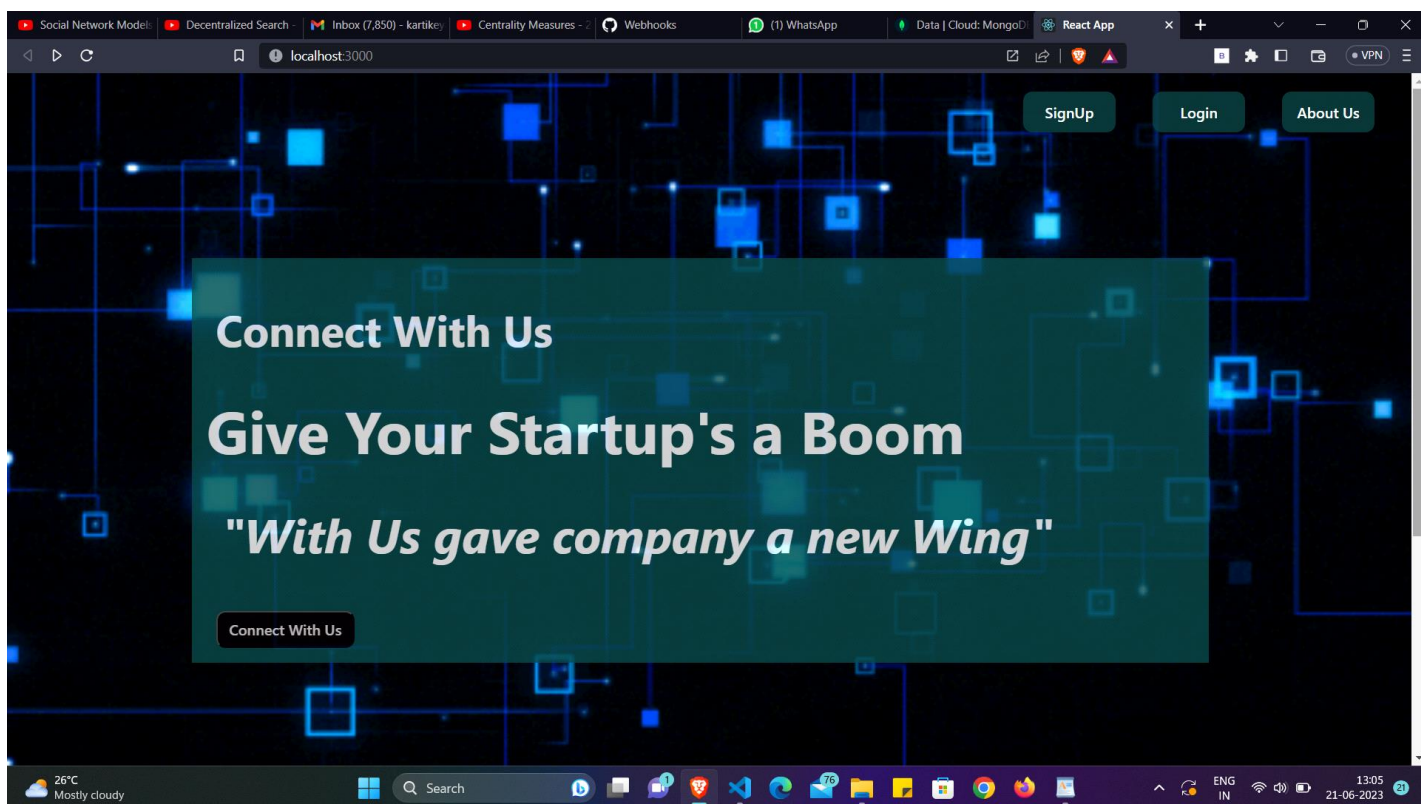
These act as application endpoints between the database and models.

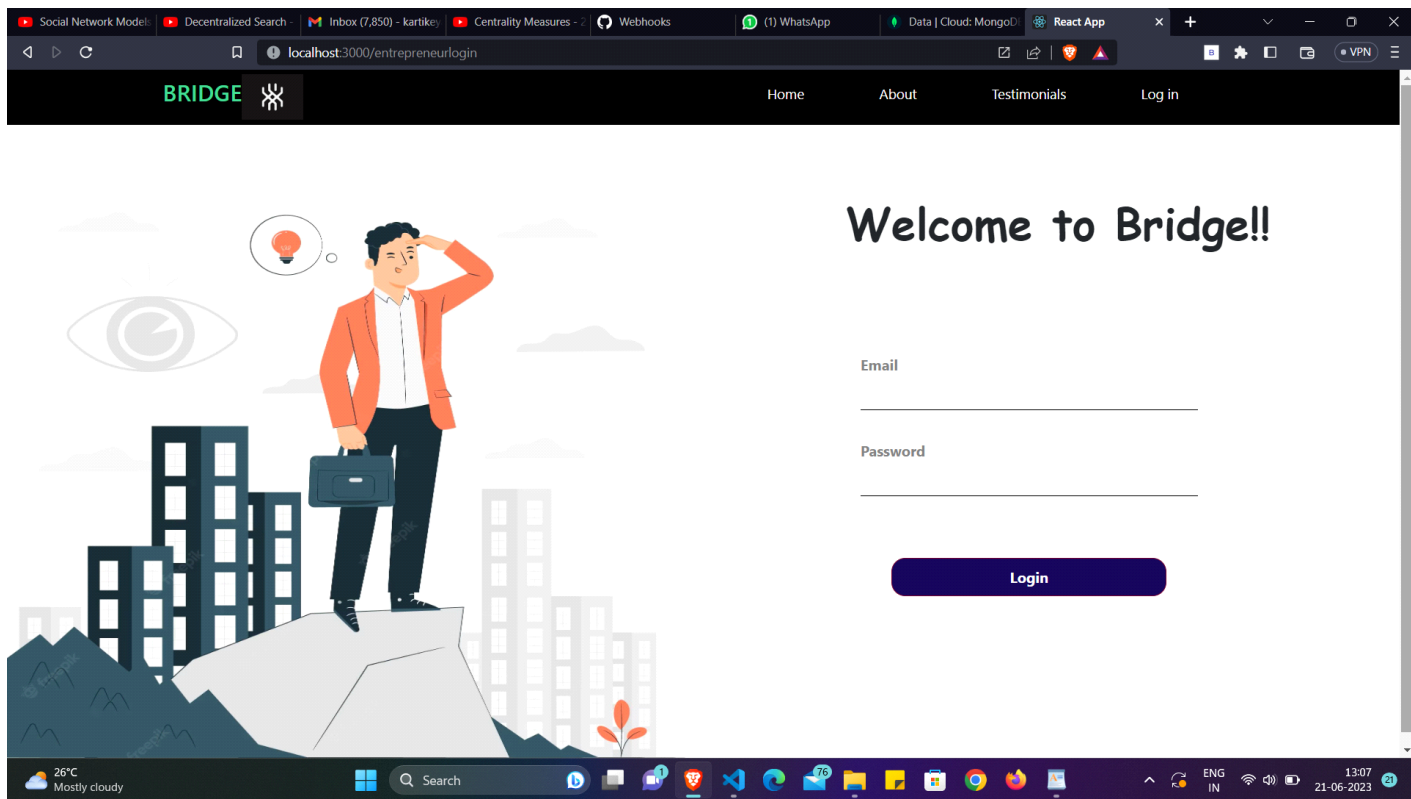
The routes are as follows:

- KPI Route: Connects the KPI database with the KPI models.
- Product Route: Establishes the connection between the Product database and the Product models.
- Transaction Route: Serves as the endpoint between the Transaction database and the Transaction models.

Chapter 4

SNAPSHOTS AND RESULTS





Atlas Incognito's ... Access Manager Billing All Clusters Get Help Incognito

Project 0 Data Services App Services Charts

Database Deployments

Find a database deployment...

Load sample datasets to Cluster0.
Atlas provides sample data you can load into your Atlas clusters. You can use this data to quickly get started exploring with data in MongoDB.

Load sample dataset Datasets

Cluster0 Connect View Monitoring Browse Collections FREE SHARED

Enhance Your Experience
For production throughput and richer metrics, upgrade to a dedicated cluster now!

Upgrade

Connections 5.0
Last 6 hours 5.0

In 15.7 B/s
Out 213.9 B/s
Last 6 hours 218.9 B/s

Data Size 155.8 KB / 512.0 MB (0%)
Last 30 days 512.0 MB

VERSION	REGION	CLUSTER TIER	TYPE	BACKUPS	LINKED APP SERVICES	ATLAS SQL	ATLAS SEARCH
7.0	US East (N. Virginia)	M0	Shared	0	0	0	0

28°C Mostly cloudy

File Edit Selection View Go Run Terminal Help app.js - Sem_Proj - Visual Studio Code

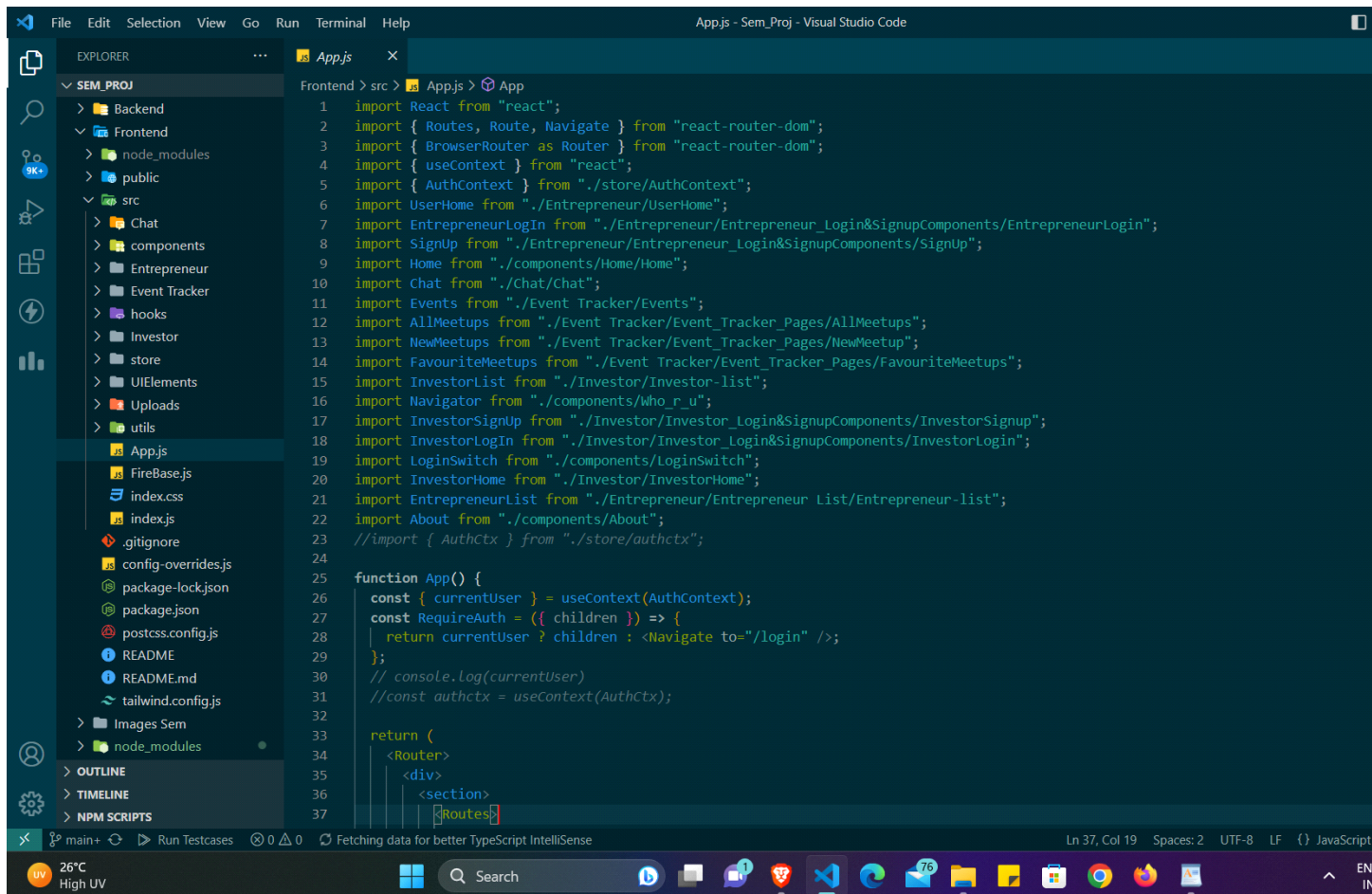
EXPLORER

- SEM_PROJ
 - Backend
 - Controller
 - frontend_images
 - Middleware
 - models
 - node_modules
 - pitches
 - Routes
 - uploads
 - app.js
 - package-lock.json
 - package.json
 - Frontend
 - node_modules
 - public
 - src
 - Chat
 - components
 - Entrepreneur
 - Event Tracker
 - hooks
 - Investor
 - store
 - UIElements
 - Uploads
 - utils
 - App.js
 - FireBase.js
 - index.css
 - OUTLINE
 - TIMELINE
 - NPM SCRIPTS

```
Backend > app.js > ...
1  const express = require('express');
2  const bodyParser = require('body-parser');
3  const mongoose = require('mongoose');
4  const path = require('path');
5  const app = express();
6  const fs = require('fs');
7  const cors = require('cors');
8
9  const entRoutes = require('./Routes/entrepreneur');
10 const conversationRoutes = require('./Routes/conversation');
11 const investorRoutes = require('./Routes/investor');
12 const messagesRoutes = require('./Routes/message');
13
14 app.use(cors());
15 app.use(bodyParser.json());
16
17 app.use((req, res, next) => {
18   res.setHeader('Access-Control-Allow-Origin', '*');
19   res.setHeader('Access-Control-Allow-Methods', 'POST, PUT, GET, OPTIONS, DELETE');
20   res.setHeader('Access-Control-Allow-Headers', 'Origin, X-Requested-With, Content-Type, Accept, Authorization');
21   next();
22 });
23
24 app.use('/frontendimages', express.static(path.join(__dirname, 'frontend_images')));
25 app.use('/pitches', express.static(path.join(__dirname, 'pitches')));
26 app.use('/uploads/images', express.static(path.join(__dirname, 'uploads', 'images')));
27 app.use('/messages', messagesRoutes);
28 app.use('/conversation', conversationRoutes);
29 app.use('/entrepreneur', entRoutes);
30 app.use('/investor', investorRoutes);
31
32 app.use((error, req, res, next) => {
33   if (req.file) {
34     console.log("consists")
35     fs.unlink(req.file.path, err => {
36       console.log(err)
37     })
38   }
39 })
```

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Chapter 5

CONCLUSION

FUTURE ENHANCEMENTS

Pitch Ocean has emerged as a game-changing platform that effectively bridges the gap between investors and entrepreneurs, revolutionizing the way they connect, collaborate, and thrive. By providing a secure and intuitive environment for meaningful interactions, Pitch Ocean has democratized access to capital and fostered a vibrant ecosystem of innovation and growth. Through its intelligent matchmaking algorithms, comprehensive features, and global reach, the platform has empowered entrepreneurs to showcase their ideas and secure funding while enabling investors to discover and engage with high-potential ventures.

Future Enhancements:

As Pitch Ocean continues to evolve, several key areas for future enhancements can be considered:

Expansion of Investor Network: Continuously expanding and diversifying the investor network will be crucial to provide entrepreneurs with a wider range of funding options and opportunities for collaboration. This can involve strategic partnerships with venture capital firms, angel investor networks, and institutional investors to ensure a robust and dynamic pool of investors.

Enhanced Investor Due Diligence Tools: Augmenting the platform with advanced due diligence tools will further streamline the investment process for investors. These tools could include access to market research, financial analysis, and performance metrics, enabling investors to make more informed decisions and evaluate the potential of investment opportunities effectively.

Integration of AI and Machine Learning: Leveraging AI and machine learning technologies can enhance the matchmaking algorithms, providing even more precise and personalized recommendations for investors and entrepreneurs. By analyzing historical data, user behavior, and market trends, the platform can offer valuable insights and predictive analytics to drive better investment outcomes.

Investor-Education Resources: Providing educational resources and content on various investment topics, industry trends, and entrepreneurial best practices can empower both investors and entrepreneurs. These resources can include webinars, tutorials, and expert insights to help users make informed decisions and stay updated with the latest developments in the investment landscape.

Global Expansion and Localization: Considering the global nature of entrepreneurship and investment, expanding Pitch Ocean's reach to new markets and localizing the platform to cater to different languages and regulatory environments will unlock new opportunities and broaden its user base. This expansion can open doors to diverse entrepreneurial ecosystems and create an inclusive platform that transcends borders.

Integration with Funding Platforms: Collaborating and integrating with crowdfunding platforms or alternative funding sources can offer entrepreneurs additional avenues for raising capital. By integrating with platforms that specialize in crowdfunding or peer-to-peer lending, Pitch Ocean can provide a comprehensive ecosystem that caters to various funding needs.

In conclusion, Pitch Ocean has already made significant strides in transforming the way investors and entrepreneurs connect and collaborate. By continuously enhancing the platform, expanding its features, and embracing emerging technologies, Pitch Ocean can further solidify its position as the go-to platform for entrepreneurial success, capital formation, and economic growth in the global startup ecosystem.

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//yeh apna nhi hai.....

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"Information Dashboard Design: Displaying Data for At-a-Glance Monitoring" by Stephen Few

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"The Visual Display of Quantitative Information" by Edward R. Tufte

"Financial Analytics with R: Building a Laptop Laboratory for Data Science" by Mark J. Bennett and Dirk L. Hugen

"Financial Data Visualization with Python: Plotly Express and Dash" by Chris Guida

"Tableau Your Data!: Fast and Easy Visual Analysis with Tableau Software" by Daniel G. Murray

"Data Visualization Toolkit: Using JavaScript, Rails, and Postgres to Present Data and Geospatial Information" by Barrett Clark

APPENDIX

User Interface Mockups: This section includes visual representations of the proposed user interface design for Pitch Ocean, showcasing the layout, features, and navigation flow of the platform.

User Profiles: Sample user profiles demonstrating the information and features available to both investors and entrepreneurs on Pitch Ocean. These profiles highlight the key details, project descriptions, and investment preferences that users can showcase on their profiles.

Privacy and Security Measures: An overview of the privacy and security measures implemented by Pitch Ocean to protect user data and ensure a secure environment for transactions and communication. This section details encryption protocols, data storage policies, and compliance with relevant data protection regulations.

Case Studies: A collection of real-life case studies showcasing successful connections made through Pitch Ocean. These case studies highlight the achievements, partnerships, and growth experienced by entrepreneurs who secured funding through the platform, along with the positive outcomes for investors.

Survey Results: Results and analysis from user surveys conducted to gather feedback and evaluate the user experience of Pitch Ocean. This section includes quantitative and qualitative data, summarizing user satisfaction, suggestions for improvements, and overall platform performance.

Glossary: A glossary of key terms and acronyms used throughout the project report to provide clarity and ensure a common understanding of the terminology.

Code:

PROJECT SOURCE CODE / LINK:

<https://github.com/Kartikeya-Vishnoi/SemProj>