Questions for defense:

1. How does this project benefit users?

- **Answer:** This project significantly simplifies the process of selecting the perfect items by consolidating information from various e-commerce platforms onto one easy-to-use web application. Instead of visiting multiple websites, users can see a comprehensive list of dresses, accessories based on their preferences like style, color, and occasion. Moreover, sentiment analysis on customer reviews helps users understand the quality and satisfaction associated with the products, providing insights that go beyond just price and specifications. This makes the shopping experience more informed and efficient, saving users both time and effort.

2. What makes your platform better than existing solutions?

- **Answer:** Our platform stands out by offering sentiment-driven product ranking, which isn't a common feature in most existing solutions. While current comparison tools focus on price and product details, we go one step further by analyzing customer feedback through sentiment analysis, offering more insightful recommendations based on user satisfaction. Additionally, the system allows for real-time updates from multiple websites and provides an intuitive interface that enables users to filter and sort dresses according to their personal preferences.

3. How feasible is it to implement this project on a large scale?

- **Answer:** Implementing this project on a large scale is feasible because of the flexibility and scalability of the MERN stack and FastAPI, which we've chosen for the backend. MongoDB's document-based structure allows for quick and efficient storage of product data, while Node.js and React enable a responsive user experience. For handling large volumes of product data and reviews, we can utilize cloud services like AWS or Google Cloud to ensure the infrastructure scales as needed. Sentiment analysis models are lightweight enough to run efficiently even on large datasets, and web scraping tools like Puppeteer can be scaled to collect data from numerous websites concurrently. Additionally, regular testing and optimization will ensure that the platform can handle high traffic and large datasets as user adoption increases.

4. Why **is this project important?**

- **Answer:** This project is important because it addresses a real-world problem that many consumers face: the time-consuming and tedious process of comparing dresses across multiple e-commerce websites. With the vast number of online retailers available today, users can easily feel overwhelmed by the choices. Our platform simplifies this by consolidating shopping items from different sources, providing users with a centralized location to compare prices, features, and customer sentiment. The inclusion of sentiment analysis offers deeper insights into user reviews, helping customers make smarter purchasing decisions. This not only saves users significant time but also enhances their ability to find products that truly meet their preferences and needs, ultimately leading to a more efficient and satisfactory shopping experience.

5. Why did you choose to focus on fashion and clothing for your FYP?

Answer: Because it's the era of fashion and social media. Every other day new fashion trends pop up on social media platforms like fb and insta as ads on social media to catch people's attention.

6. How will the sentiment analysis improve the user experience?

Answer:
Sentiment analysis will help users by providing insights into customer reviews, which are often too lengthy and numerous to go through manually. By analyzing sentiments, our platform can rank clothing items based on positive feedback, allowing users to quickly find highly-rated products. This feature will enhance the shopping experience by enabling informed decisions based on crowd-sourced data. It saves time by summarizing the sentiment of reviews.

7. **What challenges do you anticipate with sentiment analysis?**

Answer:
The main challenges with sentiment analysis include:

- **Data Noise:** Customer reviews often contain slang, abbreviations, and misspellings, which can confuse the model.
- **Context Understanding:** Some reviews may include sarcasm or contradictions, which can be difficult for the algorithm to interpret correctly.

  To address these, we plan to clean and preprocess the data, apply natural language processing techniques, and use pre-trained models to improve our sentiment analysis accuracy.

8. Why did you choose the MERN stack for this project?

Answer:
The MERN stack (MongoDB, Express.js, React.js, Node.js) is a powerful, full-stack JavaScript framework that allows us to develop both the front-end and back-end using the same language. MongoDB provides flexibility for storing unstructured data, such as customer reviews. React is well-suited for building a responsive and dynamic user interface, while Node.js and Express.js handle the back-end, making data requests efficient. Moreover, this stack is widely used in the industry, and our team already has experience with it, allowing us to focus on optimizing performance and functionality.

9. How do you plan to ensure the accuracy of your recommendation engine?

Answer:
To ensure the accuracy of our recommendation engine, we will:

- Train the model on a diverse and representative dataset of customer reviews.
- Perform data cleaning to remove noise and irrelevant information.
- Continuously test and validate the model with different datasets to check its performance.
- Use evaluation metrics such as precision, recall, and F1-score to measure the effectiveness of the recommendations.

10. What are the potential limitations of your project, and how do you plan to address them?

Answer:
Potential limitations include:

- **Data Completeness:** Some websites may have restricted access to reviews or product details, which could limit the comprehensiveness of the data we can scrape.
- **Scalability:** As more data is added to the platform, it may become challenging to maintain performance.

11. How is our system different from existing systems like Daraz?

Our system differs from the **Daraz app** in several key ways:
Daraz rely only on the stores available on the platform it does not have big brand items. And usually, people who are brand conscious don't prefer daraz for shopping dresses.

It does not have a recommendation system for reviews analysis.

It does not have any comparison feature.

Our system stands out because it combines several features that aren't commonly found together in existing platforms. While many websites allow users to buy clothes and other items, they don't typically consolidate data from multiple retailers in one place.

Future Benefits:

- Scalability to other product categories
- Enhanced user experience through personalization
- Could be used by different e-commerce platforms to rank their own products
- Monetization through affiliate marketing when user clicks on products and make purchase through platform, money can be earned in form of commissions.
- Contribution to the growing trend of AI-Driven e-commerce.
- Brands can advertise their products by paying or also to promote their products.