

AgroTech Project Report

Sandarbh Kansal (IIB2022007)

Dhruv Gupta (IIB2022025)

Kushal Garttan (IIB2022022)

Divyanshu Madhav(IIT2022267)

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A. Feasibility Analysis

The feasibility of our project is multi-faceted. From a technical standpoint, leveraging modern web development technologies ensures the creation of a scalable and robust e-commerce platform. The proficiency of the team in utilizing React for the frontend, Node.js for the backend, and MongoDB for the database guarantees the successful implementation of the project within the semester's timeframe.

Operationally, the semester-long duration provides an opportunity for comprehensive development, testing, and refinement. Weekly sprints, regular meetings, and continuous feedback loops will be established to maintain a streamlined workflow and overcome any potential challenges.

B. Novelty of the Project

Our project's novelty lies in its focus on addressing a unique problem in the realm of e-commerce. While existing platforms offer a general approach to selling food products, our platform specializes in the distribution of raw food materials based on geographical area and climate. This specialization caters to the diverse needs of farmers and consumers, setting our project apart from conventional ecommerce solutions.

The integration of sophisticated algorithms to provide accurate geographical and climate filters enhances the user experience and ensures the platform's relevance in the evolving digital landscape.

C. Project Challenges

The challenges inherent in our project stem from its non-trivial nature. Implementing precise geographical and climate filters requires an in-depth understanding of geospatial data and climate patterns. The team's commitment to

thorough research and continuous learning will be crucial in overcoming these challenges.

Additionally, the involvement of 4-6 individuals is essential to address the diverse aspects of the project. This includes frontend and backend development, database management, UI/UX design, and quality assurance. Collaboration and effective communication will be key to navigating the complexities of the project successfully.

D. Real-World Applicability

Our project holds significant promise in addressing real-world problems associated with the agricultural and food distribution sectors. By facilitating the efficient distribution of raw food materials based on geographical and climatic factors, we contribute to the sustainability of agriculture and reduce the environmental impact of long-distance food transportation.

The platform's potential impact on a section of society is substantial, as it connects farmers directly with consumers, fostering a more transparent and sustainable supply chain.

E. Informal List of Requirements

Please refer to the attached Excel sheet titled "Project Requirements" for a comprehensive and detailed list of project requirements. The list includes but is not limited to user authentication, product catalog management, order processing, payment integration, and the implementation of geographical and climate filters.

F. Tools and Technologies

The selection of tools and technologies plays a crucial role in the project's success. The team has decided to use JavaScript as the primary programming language, with php for the backend and HTML,css and js for the frontend, ensuring a consistent and efficient development environment. MySql is chosen as the database to handle the dynamic and diverse data associated with agricultural products.

Our team will utilize Visual Studio Code as the integrated development environment (IDE) and Git for version control, promoting collaboration and code management throughout the development process.

