



**Faculty Information and Communication Technology (ICT)
Computer Science Department**

**Project Proposal (Assignment 1): ISJ107V 2025 Due
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A project proposal is a written document used to initiate a new project. It must persuade a sponsor that a project must be started in order to address a specific issue or business opportunity. For the sponsor to completely comprehend why the project is essential to the business and what is entailed, it provides a detailed description of the foundation upon which the project must be started. Additionally, it must spell out the consequences of rejecting the project, forcing the sponsor to decide whether or not to approve it.

An "**Integrated Software Project**" is a development endeavor that integrates various software systems, technologies, or components into a single, cohesive solution. For smooth communication and functionality, it usually entails integrating many modules, databases, APIs, or third-party services.

Key Features of an Integrated Software Project:

- Modular Components:** Different software modules or services work together within a single system.
- Interoperability:** Various technologies, databases, and programming languages can interact through APIs or middleware.
- Automation & Efficiency:** Integration helps streamline workflows by reducing manual intervention.
- Scalability:** The system can grow by adding new modules or services without significant redevelopment.
- Data Synchronization:** Ensures data consistency across integrated platforms (e.g., CRM, ERP, and payment gateways).

Examples of Integrated Software Projects:

- **Enterprise Resource Planning (ERP) Systems:** Combining finance, HR, and supply chain management in one system.
- **E-commerce Platforms:** Integrating payment gateways, inventory systems, and customer support tools.
- **Healthcare Information Systems:** Linking patient records, billing, and diagnostic tools.
- **AI-Powered Applications:** Integrating machine learning models with web applications for automated decision-making.

1. Executive Summary

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This part will provide an overview of the entire project by outlining the project's history as well as the suggested Vision, Goals, and Timelines. Essentially, it establishes the project's context and makes the paper compelling enough to read and support, allowing the project to get underway.

Many entrepreneurs and small business owners struggle to secure funding due to poorly structured business proposals and a lack of awareness about available funding opportunities. Traditional methods of writing business plans are time-consuming and often require professional assistance, which can be expensive. Additionally, many startups and small businesses lack the expertise to identify relevant funding sources and successfully apply for grants or investments.

This project aims to develop an AI-Powered Business Proposal Generator & Funding Finder, an innovative platform that not only creates and refines business plans but also matches users with suitable funding sources based on their business profile and eligibility.

Unlike **existing solutions** that either **focus solely on business plan generation** (e.g., PrometAI, Plannit.ai) or **only offer funding recommendations** (e.g., Fundica, government databases), my platform **combines both functionalities** into a seamless, AI-driven process. By leveraging Natural Language Processing (NLP), Machine Learning (ML), and Optical Character Recognition (OCR), My system will automate business plan creation, enhance proposal quality, and intelligently match businesses with relevant funding sources. This solution not only saves time and effort but also ensures that business proposals are strategically aligned with funding requirements, significantly increasing the likelihood of approval.

The system will benefit entrepreneurs and startups by eliminating costly business plan consulting fees and increasing approval chances by aligning business plans with investor expectations. This will effectively bridge the gap between small businesses and funding providers.

Numerous research studies have validated AI's potential in business planning and funding. My project builds upon these insights to deliver a next-generation solution:

- Smith et al. (2023): Developed an AI-driven business plan generator using NLP and structured data modeling, improving plan quality and readability.
- Jones & Patel (2022): Implemented ML-based funding recommendations, achieving a 40% improvement in funding match accuracy.
- Gupta & Lin (2021): Researched OCR applications in business proposal automation, reducing manual document review time by 60%.
- Zhang & Ferreira (2023): Explored AI-assisted financial projections, leading to better investment decision-making for startups.

Unlike these research efforts, my project uniquely integrates multiple AI-driven functionalities like business plan automation, proposal refinement, and funding discovery and combines them into a single, unified platform.

- Vision: Provide a smart, automated, and accessible tool for business proposal generation and funding discovery.
- Goal: Streamline the funding application process by using AI to assist with business plan creation, improvement, and funding recommendation.

-Timeline

- **Phase 1- Research & Planning:** Define project scope, conduct market research, gather funding sources database (4 weeks)
- **Phase 2- AI Model Development:** Train NLP & ML models for proposal generation, refinement, and funding matching (6 weeks)
- **Phase 3- UI Design:** Design web-based platform, develop user interface, set up cloud storage (8 weeks)
- **Phase 4- Development & Integration:** Implement AI-powered proposal generator, document analysis, and funding recommendation system (10 weeks)
- **Phase 5- Testing & Refinements:** Conduct user testing, improve AI accuracy, optimize user experience (4 weeks)
- **Phase 6- Deployment & Launch:** Deploy platform, onboard initial users (4 weeks)

2. Background

2.1 History

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To set the stage for the project, you should provide the reader with a quick overview of the business's background before delving deeply into the proposal. Since this serves as the foundation for the project, you must outline all pertinent historical events up to this point.

Securing funding for small businesses has been a challenge for years due to a lack of structured business plans and limited access to tailored funding recommendations. Many startup businesses often struggle to present their business ideas effectively to investors and grant providers. The traditional methods of creating business plans are time-consuming, often requiring professional assistance. Additionally, funding databases are fragmented, so it makes it difficult for entrepreneurs to find and apply for the right opportunities. This project was designed to solve these weaknesses by integrating AI-driven automation for both business plan generation and funding matching.

2.2 Requirements

2.2.1 Business Problem

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Provide a detailed description of the business problem if you have one that this project must address. Describe the nature of the issue and the symptoms, for instance, low client satisfaction, poor communication, or financial difficulties.

Many entrepreneurs and small business owners struggle to secure funding due to difficulties in creating effective business proposals and navigating complex funding options. Lack of experience in proposal writing and limited access to tailored funding information often result in missed opportunities for financial support. This challenge hinders business growth and prevents promising ideas from reaching their full potential. There is a clear need for a solution that simplifies proposal creation and helps users identify suitable funding sources quickly and easily.

2.2.2 Business Opportunity

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Provide a detailed description of the project if it has a business opportunity that needs to be fulfilled. Specify the circumstances around the opportunity, the deadline for seizing it, and the method by which it must be achieved. Opportunities can include things like a gap in the market for a certain good or service, a new technology that can help the company, or a change in regulations that allows the company to offer a new good or service that it was previously unable to.

There is a growing demand for accessible tools that help entrepreneurs secure funding, especially among small businesses that lack the resources to hire consultants. This presents a business opportunity to develop a smart, low-cost solution that fills this gap. By offering an AI-powered platform that generates and improves business proposals and recommends suitable funding options, the application can serve a large, underserved market and position the solution as a valuable tool for both new and existing businesses.

2.3 Expected Solution

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The next step is to outline the opportunity or solution that the initiative must provide. You must clarify the following while outlining the solution:

- The solution's goal;
- Its scope, or what falls inside or outside of it;
- The method by which the answer must be provided (i.e., approach);

The project's sole goal is to "deliver the solution to that problem or opportunity within the timeframes required." Keep that in mind. The project team will therefore find it easier to understand what needs to be produced and by when if you can provide a detailed description of the solution.

Goal:

The goal of this project is to develop and deliver an AI-powered web application that enables users to generate or refine business proposals and receive personalized funding recommendations. The platform aims to simplify the funding application process and increase approval chances for small businesses.

Scope:

The solution will include:

- A user-friendly interface for inputting business details or uploading existing proposals.
- Natural Language Processing (NLP) for generating and enhancing business plans.
- Machine Learning (ML) models to recommend funding opportunities based on user profiles.
- Optical Character Recognition (OCR) to analyse uploaded documents.

Approach:

The solution will be developed by starting with research and planning, followed by design, development, testing, and deployment. AI models will be integrated to handle proposal generation and funding recommendations. The system will be tested with users to ensure functionality, accuracy, and ease of use. All components will be delivered within the project timeframe, ending in November 2025.

3 Proposal

3.1 Vision and Goals

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Describe the project's vision and objectives. They must be "smart," which stands for Specific, Measurable, Action orientated, Realistic and Time based. Make every effort to incorporate the business opportunity or problem into the vision so that the project team is aware of the precise problem the vision is trying to solve. An illustration of a project vision is as follows:

"By providing additional services to our valued customers, we hope to increase customer satisfaction by 25% by December 1, 2025".

Then, list 3 goals which relate to your vision above. Again, make them SMART

To design, develop, and deploy an AI-powered Business Proposal Generator & Funding Finder web application by 30 November 2025, enabling at least 50 aspiring or existing entrepreneurs to either generate a tailored business plan through guided input or upload and improve existing proposals, while receiving customized funding matches based on their eligibility.	<ol style="list-style-type: none"> 1. Develop a fully functional AI prototype for business plan generation by September 2025. 2. Implement an AI-powered business proposal review tool by October 2025. 3. Deploy a funding recommendation system that intelligently matches users to funding sources by November 2025.
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3.2 Project Deliverables

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Deliverables from each project contribute to the solution that addresses the business opportunity or challenge. These deliverables specify the scope of what needs to be produced and are essential to the project's success. As a result, it is imperative that you provide a detailed list of all the important deliverables that must be created.

Title	Description	Notes
AI Business Plan Generator	AI asks users structured questions & generates a business plan	For new entrepreneurs
AI Proposal Review & Enhancement	AI refines uploaded business plans & suggests improvements	For existing business owners
Funding Recommendation System	AI recommends grants/loans based on business profile	Helps with funding applications
Web-Based Platform	Accessible system for users to upload/download documents	Hosted on a cloud server

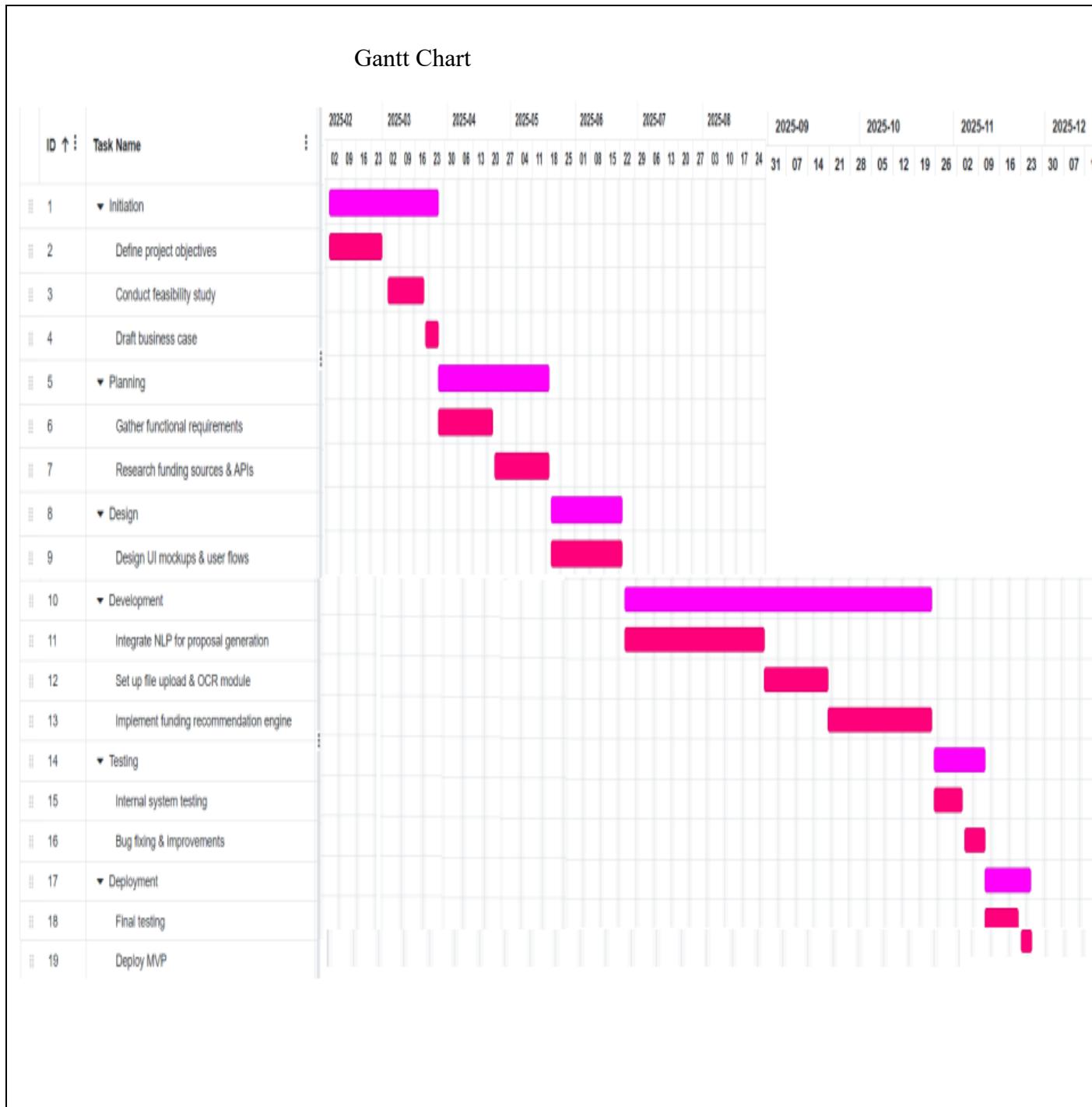
3.3 Timeframe

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Every project has to be finished by a certain date. To optimize the project's value to the business, every opportunity or business challenge must be resolved within a given timeline.

This timeline is essential to the project's success since the firm might not gain the desired degree of benefit if the solution is delivered after the allotted period.

Therefore, you must outline the project's delivery timeline. Explain the timeline and the significance of the project's delivering the solution within this time limit.



3.4 Resources

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The number of resources needed to complete the project will be a factor in our decision to approve the proposal. Fill in the following table, which lists the general resources—people, tools, and supplies—necessary to complete the job. The project can use these general numbers to get a sense of the number of resources needed to complete the project.

Type	Quantity	Notes
Tesseract OCR API	1	For reading and analysing uploaded proposals

IDE (VS Code)	1	For coding and debugging
Sample Business Plans	5	Used to train and evaluate the NLP model
Funding Data Source	1	Database/API of grants & loans in South Africa
Business Funding Dataset	2	Used for funding recommendation engine
AI/ML Developer	1	To build NLP models for proposal generation & analysis
Web Developer	1	For frontend & backend development
Cloud Hosting	1	To store user documents & AI models

3.5 Success criteria

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The success of the project is the goal of every project manager. However, what exactly constitutes success?

Is it the timely and cost-effective completion of the project or the production of project deliverables at the anticipated level of quality? Is the client satisfied with the outcome and was kept updated throughout the project? Or is it just that the opportunity has materialized as anticipated or that the business issue has been resolved?

The success criterion must be carefully considered before being specified here. We recommend outlining five essential success criteria that will be used to gauge the project's progress.

1. Functional AI-Powered Business Plan Generator so that users can create structured business plans within minutes.
2. AI Proposal Review System Works Accurately and can detect missing sections, errors, and weaknesses in business plans.
3. Effective Funding Recommendations so that AI correctly matches businesses to grants and loans.
4. Positive User Feedback: 80% of early users find the tool useful & efficient
5. At Least 50 Successful Funding Applications: Measurable impact by the end of 2025.