Namal University, Mianwali

Department of Computer Science

CSC-225 – Software Engineering
Complex Computing Problem – Milestone 1

Upwork Proposal Assistant

Real-World Client Communication & Proposal Automation System

Team Members

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Software Development Agreement

This Agreement is made on this day of **5 November 2025** between the Student Team of **Namal University, Mianwali**, enrolled in the **BS Computer Science** program, and the Requirement Provider (**RP**), **Faisal Shahzad** a Software Engineer at TechFoot with expertise in ERP and fintech systems using Node.js, Angular, and MariaDB. He now works as a freelancer, providing reliable software solutions, confirm collaboration for the semester software engineering project titled **"Upwork Proposal Assistant."**

The purpose of this Agreement is to establish a professional understanding between the Student Team and the RP for the successful design and development of the assigned software project.

Mutual Obligations:

- The RP will provide project requirements, domain guidance, and timely feedback.
- The student team will maintain professionalism and effective communication.
- Both parties will meet as needed for discussions and feedback sessions.
- All shared information will remain confidential and will only be used for academic purposes.
- The student team will work diligently to meet the project goals and deadlines.

This Agreement remains valid for the duration of the current academic semester. Both parties acknowledge that they have read and understood the terms of this Agreement and agree to collaborate responsibly for the success of the project.

Student Team:

1. Tayyab Shahzad
2. Najeeba
3. Kashif Ali

Requirement Provider (RP):
Faisal Shahzad

Requirement Provider (RP)	**Student Leader**

This document serves as an official record of mutual understanding between the student project team and the Requirement Provider.

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1 Introduction

In today's freelancing world, many online platforms such as Upwork have created new ways for freelancers to connect with Professionals clients. Success on such platforms depends on the proposal (A proposal is like a job application you send to a client who posted a project) writing, which is the first impression of freelancer on the client and client mainly select freelancer on the basis of his proposal; however, many freelancers find it difficult to write professional and attractive proposals which give them a job. And also writing a new proposal by hand takes a lot of time, effort, and experience.

Freelancers often spend hours researching how to structure their proposals, choosing the right tone, and highlighting their skills in a way that appeals to clients. This process can be frustrating, especially for beginners who lack experience or confidence in writing. In addition, each client has unique requirements and preferences, making it even more challenging to craft proposals that stand out.

The Upwork Proposal Assistant is a software that solves such kinds of problem. Automates the process of writing proposals using the smart template based on the user's previous history or client requirements and helps freelancers get their job. By analyzing past successful proposals and understanding client needs, the software can generate proposals quickly, ensuring consistency, professionalism, and a higher chance of success.

This tool is not only a time-saver but also a learning aid, allowing freelancers to understand what makes a proposal effective. Over time, users can improve their writing skills while relying on the software to handle repetitive tasks and tailor proposals for different projects and clients.

2 Problem Statement

Freelancers on platforms like Upwork often struggle to write professional and attractive proposals. Writing proposals manually is time-consuming, requires skill and experience, and can reduce their chances of getting selected. If a freelancer writes a proposal by hand, it takes a lot of time, and during that period, hundreds of other freelancers may apply for the same job, reducing the likelihood of the proposal being noticed.

Moreover, proposals need to address the client's specific pain points effectively; generic or poorly written proposals often fail to capture the client's attention. Freelancers frequently spend hours researching how to structure their proposals, deciding the right tone, and highlighting their skills in a way that appeals to clients. This process can be frustrating, especially for beginners who lack experience or confidence in writing proposals.

Every client has unique requirements and preferences, making it even more challenging to craft proposals that stand out. A single poorly timed or poorly worded proposal can cost a freelancer a potential opportunity, even if they are highly skilled in their domain. Hence, there is a strong need for a fast, efficient, and intelligent solution that not only saves time but also ensures proposals are professional, personalized, and compelling.

The Upwork Proposal Assistant addresses these problems by automating proposal writing using smart templates based on the user's previous history and client requirements. It quickly generates proposals that maintain consistency, professionalism, and focus on client needs, increasing the chances of getting selected. Additionally, this software serves as a learning tool, helping freelancers understand what makes a proposal effective, improving their writing skills over time while managing repetitive tasks and

tailoring proposals for different projects and clients.

3 Objectives

The Upwork Proposal Assistant is a software which solves such kinds of problems. It automates the process of writing proposals by using the smart template based on the user's previous history or client requirements and helps freelancers to get their job. There are already softwares present in the market which are doing the same thing, but the thing which makes our software unique is this that it not only writes proposals, but before doing this, the software looks at the past history of the client and fetches all its important information such as location from which freelancer can apply, job success rate, job completion rate, client reviews, client country, average hourly paid rate, last activity, total number of job posts, and the most important thing, the format from which the post is written.

After doing all this, the software shows a detailed summary to the freelancer, based on which the freelancer decides whether he needs to write a proposal or reject it. This feature gives freelancers a smarter way to decide which jobs are worth applying for, saving their time and increasing their chances of success. It also allows freelancers to focus more on quality work rather than wasting time applying for irrelevant jobs.

After this, if a freelancer chooses to write a proposal, then the software suggests the best possible template, but also gives the freelancer full control to modify or customize it according to his own choice. The software then completes the proposal automatically in a professional format, ensuring that it matches the client's requirements, tone, and expectations.

In short, the main objective of this project is to help freelancers write proposals faster, smarter, and more effectively, using automation, intelligent analysis, and real-time client insights. This will not only improve the efficiency of freelancers but also increase their chances of getting hired by sending high-quality proposals in less time.

4 Stakeholders

As the project is about developing template for the user specially for freelancers so its end user is a freelancer that may interact this software to create proposals for their client. This system will provide template to end user so they could make proposal easily for their client. The end user can also analyze their client profile and can also generate personalized proposals based on different templates provided by the software.

The system administrators are also stack holder for this software as he will be responsible for managing the functionality of their software. They can also check the profiles of the system users. They is also responsible for the ethical use of the system, if there is any unethical activity is being held they can report to the legislative structure. In case of managing system, the administrator is responsible to report the bugs, updating and adding new features in the system to developers.

Developers are also user for this software as they are responsible for the smooth functionality and can use according to the constraints of the administrator in case of adding, removing and updating features. If there is any error occurs in the system after the launching, they are responsible to check this bug and remove it. In this way, they are the salient users of the system.

Project supervisor is also the user of the software as they are responsible to provide a good featured software to the investors, system administrator and other key figure of the project. They works as a bridge between the developers team and administrative team. So they is also key user for the software.

Investors, external platform such as upwork can also use this software as the part of their own to provide facility to their users.

So the system could have multiple users, so we can say that system could be used publically.

5 Software Development Methodology

The Agile development methodology will be adopted for this project. The methodology is chosen as it supports incremental progress will continuous iterations, allowing the system to evolve gradually and adapt to changing requirements. This methodology promotes team collaboration, early detection of issues, and reduces the risk of failures in later stages of development. Its iterative nature also ensures that the system remains scalable, maintainable, and adaptable to future needs.

The project will be divided into short, focused sprints, with each sprint dedicated to specific tasks such as data analysis, proposal generation, or user interface enhancement. These focused tasks ensure that the teams' efforts are concentrated and measurable, allowing for easy tracking of achievements. At the end of each sprint, a working prototype or functional component is delivered, which can then be evaluated by stakeholders. This iterative approach reduces the risk of errors.

Agile methodology promotes collaboration. Stakeholders maintain continuous communication to ensure alignment throughout the project. Daily meetings, sprint planning sessions and sprint retrospectives provide a structured way to share updates discuss challenges and propose solutions.

Another important advantage of Agile is early detection and resolution of issues and errors. Continuous testing and integration throughout each sprint allow team to identify bugs. This approach helps maintain a high standard of quality along reducing risks.

Agile methodology emphasizes customers, satisfaction. By involving stakeholders throughout development process, the team ensures that the product is up to the expectations and requirements of user. Feedback is asked in every sprint, which allows continuous improvement.

The iterative approach ensures that the system remains organized, well-structured and capable of adapting to future technological advancement

By following Agile principles, project achieves a balance between speed, quality and flexibility. The combination of iterative progress, continuous testing and collaborative development ensures that final product is efficient and according to user requirements. Overall, Agile methodology enhances the productivity of team, improves communication and ensures that the product will be of high quality and reliable.

6 Tools and Technologies

Developing software is not an easy process, there require a lot of requirement. To implement these requirement, we use different tools. In this system, we are going to use lot of tools in case of documentation and designing. Some of the tools are as follows:

LaTeX: As LaTeX is high quality documents preparation tool so we will be writing proposals and requirements from the RP on LaTeX. All type of documentation will be prepared through this tool.

GitHub: We will be using GitHub for the storing of proposals by creating repositories and for the collaboration between the projects members. We will also be storing meeting minute and videos that will be captured during the meeting with RP. We will also be using GitHub for the controlling of version.

Figma: Figma is powerful tool for creating layout for the software. We can create interactive prototype for our system.

Canva: We will be also using this tool to create design for our system. Some graphics will also being done here. So Canva will also be used.

LucidChart: This is an advanced UML which provide us different feature for the creating flowchart to present requirement visually. This toll will also be used to manage requirement and creating simplicity.

References

Here are some link of sites from where the help for the developing of this proposal has been taken.

https://mentorsol.com/best-software-development-tools/

https://www.upwork.com/resources/how-to-create-a-proposal-that-wins-jobs

https://pmc.ncbi.nlm.nih.gov/articles/PMC8021201/

https://www.mdpi.com/2076-3417/12/21/10698