

with redundant elements. In situations where project resources are limited, and the project itself is substantial and fraught with challenges, programmers might forsake sound programming practices. Instead, they might resort to writing solutions that seem to address immediate issues. While this approach might yield a functional solution, it often comes at the cost of neglecting proper programming practices and ignoring the crucial practice of continuous refactoring. Regrettably, the consequence of this behavior is that the final product may suffer from poor performance and could even fail to execute efficiently on client machines. This outcome results from the failure to adhere to established best practices and the lack of regular code optimization.

In such scenarios, where programmers are pressured to focus solely on writing code rather than embracing good programming principles and consistently refactoring, the assistance of ChatGPT can be invaluable. ChatGPT can provide guidance on coding best practices, suggest ways to refactor and optimize existing code, and help programmers identify more efficient solutions to their challenges. By incorporating ChatGPT into the development process, programmers can receive real-time support that encourages the implementation of better coding practices, ultimately leading to a more efficient and maintainable end product.

4. CONCLUSION

Through a thorough exploration of Chat-GPT's capabilities, this research identified numerous areas where the model can offer substantial benefits to project management. From enhancing communication and collaboration through real-time interactions and language translation to aiding in requirement gathering, brainstorming, and issue tracking, Chat-GPT proves to be a versatile tool for project teams. Its ability to generate structured documentation, offer intelligent responses, and provide decision support enhances project managers' capabilities to address constraints and facilitate effective estimation. The application of Chat-GPT in software project management brings forth a set of advantages that must be balanced with potential limitations. While Chat-GPT can significantly improve communication, automate routine tasks, and provide valuable insights, it should be recognized that it lacks emotional intelligence and may generate incorrect or misleading information if not guided correctly. Ethical considerations, privacy concerns, and the need for human expertise in certain domains must also be taken into account. Furthermore, this paper demonstrated Chat-GPT's role in project estimation through the creation of a Work Breakdown Structure (WBS) and the subsequent calculation of project duration and cost. While the provided estimates serve as a useful guideline, project managers should understand that variations in complexity, unforeseen challenges, and individual productivity levels can impact actual project timelines and costs.

REFERENCES

1. APM Body of Knowledge. / Murray-Webster, R.D., Darren., *APM Body of Knowledge 7th edition*. 7th ed ed. 2019, Princes Risborough: Association for Project Management. 230.
2. Alec Radford, K.N., Tim Salimans, Ilya Sutskever, *Improving Language Understanding by Generative Pr*. 2018. 12.
3. OpenAI* , *GPT-4 Technical Report*. 2023.
4. Sandra Cleary, M.H., et.al, *The Communication Handbook*. 2007, Republic of South Africa: Juta & Co.
5. Zulch, B., *Communication: The Foundation of Project Management*. Procedia Technology, 2014: p. 1000-1009.
6. Talukhaba, A.M., Thomas & Miruka, Collins, *Indicators of effective communication in remote projects*. International Journal of Project Organization and Management, 2010.
7. *A guide to the project management body of knowledge (PMBOK® guide)*. -- Fifth edition. 2013, 14 Campus Boulevard Newtown Square, Pennsylvania 19073-3299 USA: Project Management Institute, Inc.
8. Antoine Asseman, E.R., Heba Dawoud, Mariam Salim, Nada Ashqar, Nasser Alkhuzaei, Rana Rihan, Souad Mecheter, Abdelaziz Bouras, *Software Project Management: Theory of Constraints, Risk Management, and Performance Evaluation*. THE JOURNAL OF MODERN PROJECT MANAGEMENT, pp:9-21, 2014.
9. Eliyahu M. Goldratt, J.C., *The Goal: A Process of Ongoing Improvement*. 1992: North River Press, 1992.
10. Andrew Stellman, J.G., *Applied Software Project Management*. November 2005, O'Reilly Media, Inc. 1005 Gravenstein Highway North Sebastopol, CA 95472.: O'Reilly.
11. Glassdoor. Available from: <https://www.glassdoor.com/>.