Quest Journals
Journal of Software Engineering and Simulation
Volume 11 ~ Issue 9 (September 2025) pp: 01-08
ISSN(Online) :2321-3795 ISSN (Print):2321-3809
www.questjournals.org

Research Paper

How to use AI systems to create tools that augment human skills.

Manini Debashis De*[1], Aldrin Shane Cutinha*[2]
*[1]*AbuDhabiIndianSchool,AbuDhabi,UnitedArabEmirates.*
*[2]*AbuDhabiIndianSchool,AbuDhabi,UnitedArabEmirates*

ABSTRACT
Artificial Intelligence is one such revolutionary technology that has been integrated into applications and websites to assist humans with precision and efficiency. This study analyzes how AI systems generate templates for websites, apps, and technical/non-technical documentation, while exploring both their benefits and challenges. The research highlights the augmentation potential of AI in productivity, accessibility, and creativity, while also addressing risks such as prompt precision, bias, and ethical concerns.

Keywords: *AI; Natural Language Processing; NLP; ChatGPT; Copilot; Applications; Websites; Large Language Models; LLMs;*

***R**eceived 01 Sep., 2025; **R**evised 07 Sep., 2025; **A**ccepted 09 Sep., 2025 © The author(s) 2025.*
P**ublished with open access at **www.questjournas.org

I. INTRODUCTION

Have you ever used a website builder that instantly created a polished page layout? Or perhaps an AI assistant that drafted an entire project report outline in seconds? If so, you have already experienced the power of artificial intelligence in **augmenting human skills**—a concept that is transforming how we create, design, and innovate.

Rather than replacing humans, these AI systems act as skill amplifiers, enhancing our abilities, accelerating tedious processes, and enabling people of all experience levels to produce professional-quality results. From generating detailed templates for websites and mobile applications to producing structured technical and non-technical documentation, AI is making once time- intensive tasks faster, more consistent, and more accessible.

In this study, we will explore how AI can be leveraged to design tools that work in partnership with humans to create such templates. We will examine the technologies behind these systems, review real-world applications, discuss their benefits and challenges, and consider the future of AI-driven skill augmentation. Join us as we delve into this evolving field and discover how human–

AI collaboration is reshaping the way we work, create, and innovate.

II. How Do AI Systems Generate Templates?

2.1 Template Generation

AI tools can automatically produce structured templates—such as website layouts, proposal documents, or design mockups—based on minimal user input.

- For instance, AI-powered **proposal template generators** analyze successful past proposals, detect patterns, and dynamically assemble new templates that fit brand guidelines and customer segments, offering version control and CRM integration.

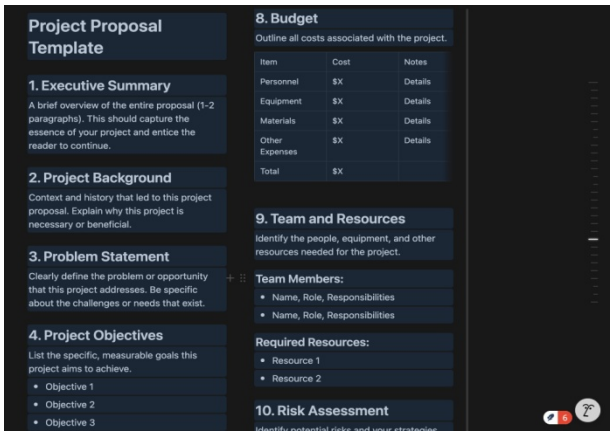


Fig1.1 AI-generated proposal template scaffold created using NotionAI.

2.2 Personalization 2.4IntegrationwithHumanWorkflow

These tools tailor outputs to user needs, preferences, or contextual data.

- **Canva's Magic Studio** intelligently suggests and customizes design templates by incorporating brand elements and style consistency, enabling users to rapidly create polished visuals.
- Brands also leverage AI to deliver **real-time hyper-personalization at scale**, significantly increasing engagement and ROI through content targeting.[1]

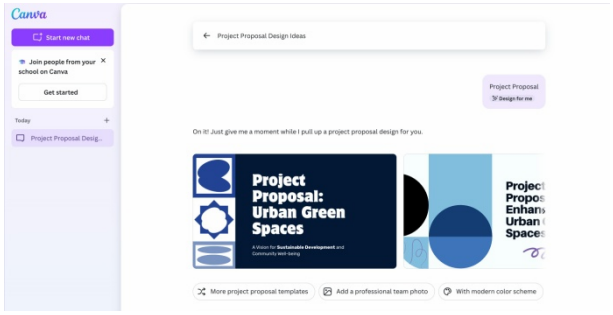


Fig 1.2 Visual Representation of the AI Augmented Tool Proposed by Canva

True augmentation happens when AI tools are embedded into human work flows, enabling seamless use without disruption.

- **Notion AI** is integrated directly into users' workspace, summarizing notes, generating content, and applying context-aware transformations within the documents they're already working on.[6]
- AI-powered **workflow tools** like those featured in TechRadar's overview highlight tools embedded into CMS, design platforms, or productivity suites, enhancing content creation and lifecycle management across familiar interfaces. [3]

2.3 Iterative Feedback Loops

Human-AI collaboration often involves iterative refinement: users review AI-generated content and provide feedback, prompting the AI to improve subsequent versions.

- The concept of **Self-Refine** in LLMs exemplifies this approach: the model generates an initial response, critiques it, and refines its output without requiring additional training— leading to substantial performance gains. [2]
- In practical applications, such as personalized recommendation systems, feedback loops continually fine-tune suggestions to better match user behavior and context.

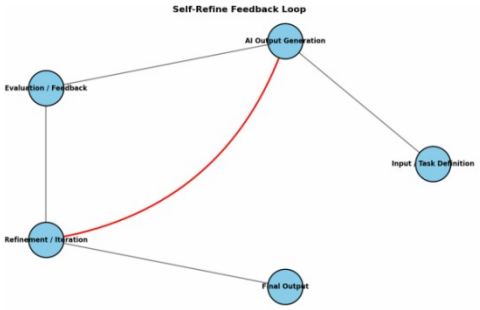


Fig1.3 Self refine feedback loop showing AI output refinement through iterative feedback with red arroe highlighting the refinement

III. Benefits of AI-Augmented Template Systems

- Help reduce mundane tasks and make employees and users increase productivity, especially with regard to tasks like PPT making and general gathering and organization of data.

IV. Challenges of an AI system

4.1 Precision

These AI-powered systems require extreme accuracy with information, as they cannot work on assumptions and depend on the user to be extremely precise in the prompt.

Fig4.1: ChatGPT giving a generic response

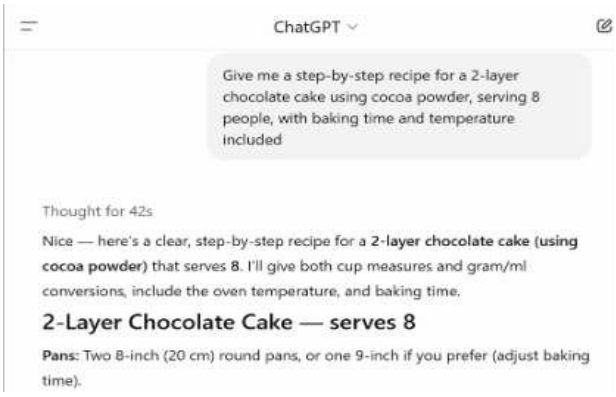


Fig2: A specific prompt with exact specifications

Such similar examples can be seen with other AIs as well, whether it is making a PPT, website, or a poster, every prompt needs to address exactly what the user requires.

4.2 Bias

Further risks could be regarding bias, since LLMs work on data being fed to them, a chance of bias may occur in their decision-making ability. Additionally, AI could also be biased as a result of incomplete data or if certain AI models have not been trained with a large enough data set. Although there are multiple ways an AI can face bias [4]. The key point to remember is that these biases could hinder trust in AI models.

4.3 Accuracy

The main challenge is regarding the accuracy of the information. We assume precision based on the ability of the model to match predictions with a given set of expected results. In addition, the accuracy could also be affected as a consequence of external factors, something that cannot be predicted [5].AI is still known to give incorrect answers, and minute mistakes could be there in the answers, especially about mathematical questions. Although many of these problems have been fixed, LLMs are still prone to mistakes, and having to check everything in detail destroys the purpose of AI augmenting human skills.

4.4 Security and Privacy

While companies continue to push out AI models to boost productivity, the primary concern for it is with regard to security and privacy, and although it varies depending on how different organizations collect and use their data. Various concerns could include the collection of sensitive data, the use of data without consent, data leakage, and data exfiltration, to name a few [6].
Adversaries could make use of these AI models and, through manipulation, could extract sensitive information. This, in turn, could cost companies a fortune.

V. Understanding Augmented Tools

5.1 Digital Assistant

AI has played a significant role in upgrading the modern workplace. The ability to essentially take a basic calendar with deadlines and prioritize it to maximize efficiency. AI-powered systems have become an integral part of any workplace. It can perform tasks, such as generative AI, conversational AI, and machine learning, handle IT requests, manage approvals, and surface relevant insights [7]. These systems can be integrated into any platform, supporting all employees with a very cost-efficient plan.

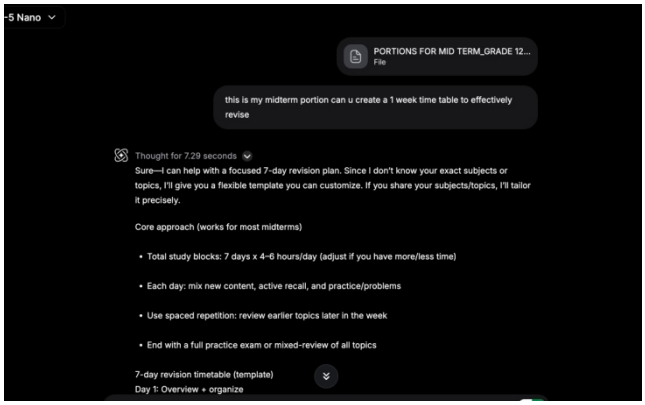


Figure5.1 Calendar Creation using GrokAI

5.2 Software Development

Platforms such as Replit and Canva have made it immensely simpler to create mobile applications/websites. It requests the user to type in a prompt, which it then cross-references with past data, standard libraries, and frameworks, and makes predictions about future data [8]. By referring to past data and standard libraries, it works on code that will minimize the presence of bugs and syntax errors. This allows technical and non-technical personnel to create apps, often for a fraction of the cost as compared to hiring an employee/freelancer. Additionally, such AI systems can produce fully working websites in a very time-efficient manner and allow the user to make immediate changes according to their needs.

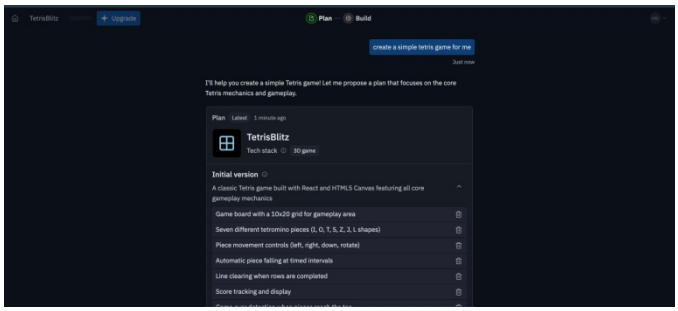


Fig5.2 Tetris Game Creation using ReplitAI

5.3 Content Writing

AI-augmented writing platforms like ChatGPT, Copilot, and other Large Language Models (LLMs) are commonly used for their ability to create and transform existing content according to their operators' needs, making it one of the most useful applications of AI. These AI models work using a deep neural network made up of multiple layers of transformers. These platforms can then be trained by feeding them large amounts of data, helping them identify patterns with different words. These layers are built to handle sequences of data, for instance, sentences or paragraphs, and are able to produce responses [9]. Additionally, since it works on prompts, it is able to give personalized responses and allows for changes on the spot, making it highly efficient.

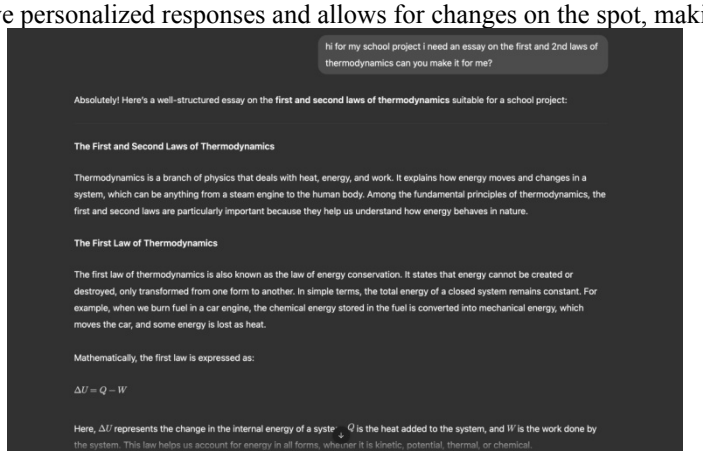


Figure5.3 AI writing interface demonstrating content generation, summarization, and context- aware suggestions to assist users in creating text efficiently by ChatGPT.

5.4 Image/Video Generation

AI-systems text-to-image generators are common tools that are equipped with natural language processing capabilities and computer vision to generate images.

Models like CogView2, DALL-E 2 have shown immense success in the creation of realistic and high- quality video through large-scale pre-trained language models and generative models [10]. Nevertheless, there is still a vast scope of improvement that can happen, as it is still easily noticeable if a picture or video has been designed by AI.

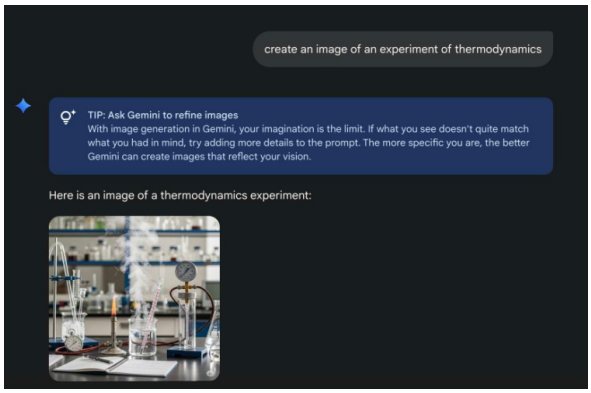


Figure5.4 Image Creation by GeminiAI

VI. Case Study: AI in Content Creation (PowerPoint Presentations)

Objective:
Results:

Task/Activity	**Manual (Without AI)**	**AI-Assisted (With AI)**
Total Time Taken	2 hours	10 minutes
Gathering Information	40 minutes (Google, Wikipedia, NCERT)	11 seconds (Grok AI+ NCERT)
Selecting Template + Making PPT	55 minutes (Slides go + manual work)	4 minutes (Gamma AI)
Adding Images	20 minutes	6 minutes
Accuracy	8–9 mistakes per slide(~60% accuracy)	Near-perfect Grammar and structure
Last-Minute Changes	5 minutes	Minimal

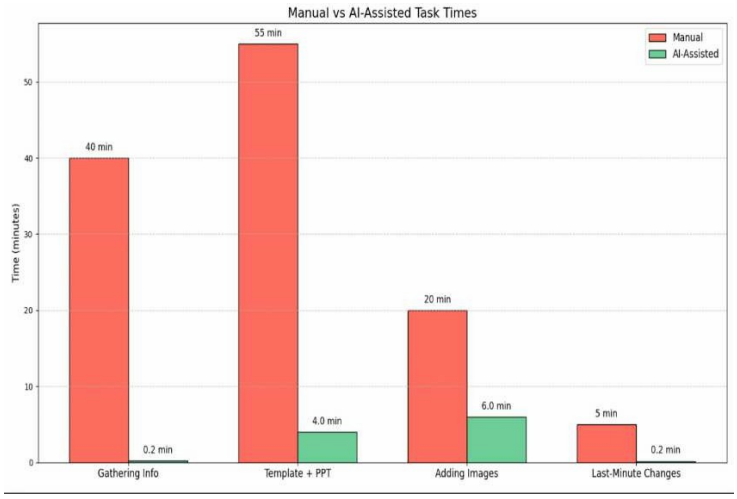
To better understand the practical benefits of AI- augmented tools, we conducted a case study comparing the process of preparing a presentation manually versus with AI assistance. The chosen task was to create a **10-slide PowerPoint presentation on "Manufacturing Industries."**

Methodology:

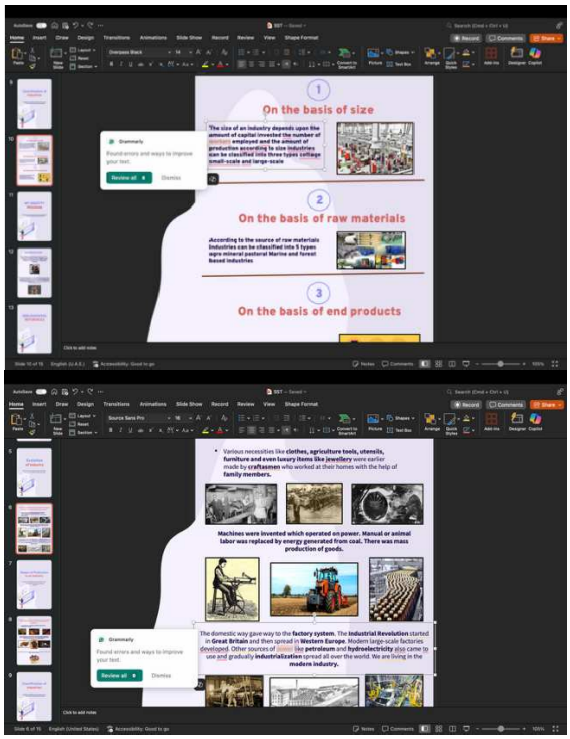
- **Manual Approach**: The presentation was created from scratch using traditional tools. Information was collected from Google, Wikipedia, journals, and NCERT textbooks, while a template was sourced from Slidesgo. The process required manual typing, formatting, and image insertion.

- **AI-Assisted Approach**: GrokAI was used to gather information, and Gamma AI was used to automatically generate a presentation template and content. Additional supporting images were inserted manually for refinement.

Graph:



Picture Evidence:



Figures 1 and 2 show the inaccuracies of a PowerPoint presentation made without AI.

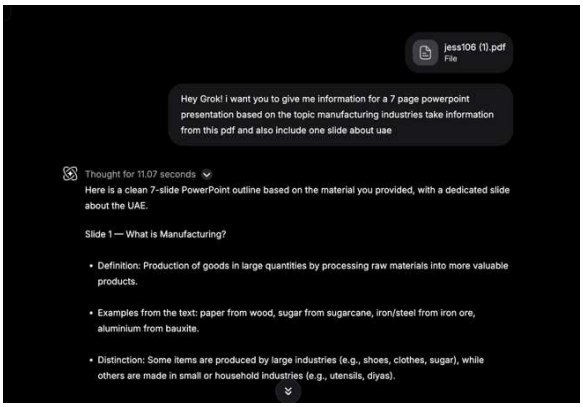


Figure 3 shows how fast GrokAI gathered information and executed it within a matter of seconds.

Figure 4 shows the presentation created within 4 minutes with no grammatical errors.

Findings:

The AI-assisted process reduced preparation time by nearly **92%** (from 2 hours to 10 minutes). It also produced

slides with **higher grammatical accuracy and improved structure**, requiring minimal corrections. In contrast, the manual method involved lengthy information gathering, more frequent spelling and grammatical errors, and greater effort in formatting and design.

Conclusion:
This case study demonstrates that AI significantly enhances productivity and quality in presentation- making. By automating tasks such as content generation, formatting, and design, AI tools like GrokAI and Gamma AI allow users to focus on refinement rather than repetitive work. While human oversight remains necessary for accuracy and contextual alignment, AI augmentation clearly offers substantial advantages in efficiency and consistency.

VII. Conclusion

Artificial Intelligence has grown from just an experiment into an essential collaborator in human inventions. The research presented displays that contemporary AI architectures are not meant to replace specialists but instead multiply their human capacity to do tedious tasks by providing scaffolding to intricate cognitive activities. The frameworks provided by AI in reusable and can he used in heterogeneous fields of software development, imaginative design, etc.

Systematically evaluating the complex structure revealed sustained surges in output, consistent quality, and expanded professional repertoire. Granted, it has its faults, such as when it does not have an answer, it invents new things, and may give false information, leading to distortion in factual reality, ingrained algorithmic partiality, and far-reaching ethical quandaries related to data privacy, equity, and accountability.

Accountable release of AI requires that AI's capabilities be located within the government systems that stress gravely on transparency, and are overseen by strict human supervision. Only under these circumstances, the reliance and the trustworthiness towards AI will increase, which, in turn, amplifies the human voice without any unethical repercussions.

Looking ahead, the trajectory of human–AI collaboration will be defined by the balance we strike between technological innovation and principled stewardship. If this equilibrium is achieved, AI has the potential not merely to augment individual productivity, but to reshape the epistemic and creative foundations of how societies learn, build, and innovate.

ACKNOWLEDGMENT

We want to extend our sincere appreciation to the Computer Science faculty of Abu Dhabi Indian School, Muroor, especially **Mrs. Nandini Kurmude** and **Mrs. Leena Kurien**, for providing us with a framework to study and carry out research on "How to use AI systems to create tools that augment human skills".

REFERENCES

[1]. Moddy Mattan Al-Powered Personalization: Personalized Customer Experiences at Scale. https://www.brandxr.io/ai-powered-personalization-personalized-customer-experiences-at-scale?utm_source=chatgpt.com
[2]. Aman Madaan, Niket Tandon, Prakhar Gupta, Skyler Hallinan, Luyu Gao, Sarah Wiegreffe, Uri Alon, Nouha Dziri, Shrimai Prabhumoye, Yiming Yang, Shashank Gupta, Bodhisattwa Prasad Majumder, Katherine Hermann, Sean Welleck, Amir Yazdanbakhsh, Peter Clark (2023). Self-Refine: Iterative Refinement with Self-Feedback. Arxiv.org
[3]. Pawan Singh (2025) I tried 70+ best AI tools in 2025. https://www.techradar.com
[4]. Holdsworth, J. (2023, December 22). What is AI bias? IBM. https://www.ibm.com/think/topics/ai-bias
[5]. Marwala, T. (2024, July 18). Never assume that the accuracy of artificial intelligence information equals the truth. United Nations University. https://unu.edu/article/never-assume-accuracy-artificial-intelligence-information-equals-truth
[6]. Gomstyn, A., & Jonker, A. (2024, September 30). Exploring privacy issues in the age of AI IBM. https://www.ibm.com/think/insights/ai-privacy
[7]. Intellias. (2025). How AI-Powered Digital Employee Assistants Transform Workplace Productivity.
[8]. Intellias Insights. https://intellias.com/ai-powered-digital-employee-assistants/
[9]. How To Learn Machine Learning. How AI Is Being Used to Write Code. https://howtolearnmachinelearning.com/articles/how_ai_is_used_to_write_code/
[10]. D. Kalla & N. Smith (2023, March 1). Study and Analysis of Chat GPT and Its Impact on Different Fields of Study. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4402499
[11]. A. Singh (2023, November 10). A Survey of AI Text-to-Image and AI Text-to-Video Generators. https://arxiv.org/pdf/2311.06329