

AIM (Artificial Intelligence Marketer)

Sir Syed University of Engineering and Technology

Project/Thesis ID. 2023: 111

Session: BSc. Spring 2020

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Certification

This is to certify that [Muhammad Danial] [2020S-BSCS-045] , [Ahmer Ali] [2020S-BSCS-005] , [Talha Ghani] [2020S-BSCS-041] and [Hasnain Ali Zaidi], [2020S-BSCS-014] have successfully completed the final project [Title of the Final Project], at the [Sir Syed University of Engineering and Technology], to fulfill the partial requirement of the degree [Bachelor of Science , Computer Science].

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Project Title (mention project title here)
Sustainable Development Goals

(Please tick the relevant SDG(s) linked with FYDP)

SDG No	Description of SDG	SDG No	Description of SDG
SDG 1	No Poverty	SDG 9	Industry, Innovation, and Infrastructure <input type="checkbox"/>
SDG 2	Zero Hunger	SDG 10	Reduced Inequalities
SDG 3	Good Health and Well Being	SDG 11	Sustainable Cities and Communities
SDG 4	Quality Education	SDG 12	Responsible Consumption and Production
SDG 5	Gender Equality	SDG 13	Climate Change
SDG 6	Clean Water and Sanitation	SDG 14	Life Below Water
SDG 7	Affordable and Clean Energy	SDG 15	Life on Land
SDG 8	Decent Work and Economic Growth	SDG 16	Peace, Justice and Strong Institutions
		SDG 17	Partnerships for the Goals



Range of Complex Problem Solving		
	Attribute	Complex Problem
1	Range of conflicting requirements	Wide Range: Balancing the need for rapid content generation with high-quality and engaging output. Managing the tension between automation and human creativity.

2	Depth of analysis required	Deep Analysis: Analyzing social media performance metrics, user interactions, and demographics. Utilizing data science methodologies for comprehensive insights.	
3	Depth of knowledge required	High Depth: Understanding of AI and generative models, social media algorithms, data science techniques, and marketing strategies.	
4	Familiarity of issues	Varied Familiarity: Familiarity with AI technology is crucial. Additionally, understanding social media dynamics, marketing trends, and client-specific needs is essential.	
5	Extent of applicable codes	Extensive: Implementation of AI algorithms, API integrations, and potentially incorporating various programming languages for data analysis.	
6	Extent of stakeholder involvement and level of conflicting requirements	High Involvement: Collaboration with clients, social media platforms, and possibly legal entities. Balancing conflicting needs of clients for cost reduction and quality enhancement.	
7	Consequences	Significant Consequences: Impact on client satisfaction, brand reputation, and potentially the success of social media marketing campaigns. Economic consequences for SMMA's cost structure	
8	Interdependence	High Interdependence: The effectiveness of content generation depends on the integration of AI, social media APIs, and accurate user data.	
Range of Complex Problem Activities			
	Attribute	Complex Activities	
1	Range of resources	Diverse Range: Requires AI expertise, data scientists, social media specialists, and potentially legal advisors. Also, substantial computational resources for AI model training.	
2	Level of interaction	High Interaction: Regular interaction with clients, social media platforms, and ongoing user engagement analysis.	
3	Innovation	High Innovation: Continuous innovation in AI algorithms, content generation strategies, and adapting to evolving social media trends.	
4	Consequences to society and the environment	Moderate Consequences: Depending on ethical considerations and data privacy policies, impacts on society may vary. Environmental consequences linked to the energy consumption of AI models.	
5	Familiarity	Varied Familiarity: The need for familiarity with AI is paramount. Additionally, familiarity with social media dynamics, marketing practices, and potential legal and ethical considerations is essential.	

Abstract

The AIM (AI Marketer) project aims to revolutionize the Social Media Marketing industry by introducing an AI-powered tool that streamlines the content creation process and enhances post-performance analytics. In response to the challenges faced by Social Media Marketing Agencies (SMMA's), the project's core objectives include automating content generation using Generative AI, providing a centralized platform for posting across various social media channels, and implementing robust analytics for tracking post performance. By automating tasks traditionally performed by multiple roles—Graphic Designers, Content Writers, SEO Specialists, Social Media Managers, and Analysts—the project drastically reduces the time, cost, and managerial burden associated with content creation.

The system operates by connecting clients' social media accounts, websites, and email addresses to AIM. Using natural language prompts and domain-wise filters, AIM generates diverse content, including emails, posters, captions, and hashtags. The centralized software then autonomously posts this content on connected platforms through APIs. Post-interaction data, gathered from social media and websites, undergoes detailed analysis and filtering using Data Science methodologies, facilitating lead identification, understanding reach, and consumer segmentation.

Further advancing its capabilities, AIM extracts contact details from engaged users for future campaigns. The project not only envisions speeding up content generation by tenfold but also reducing production costs by a quarter, eliminating the need for a human workforce. As a showcase of its success, AIM hosts a Poster Exhibition gallery, displaying a library of past content along with user guides. The transformative potential of AIM lies not only in its efficiency gains but also in its democratizing effect, enabling individuals from diverse backgrounds to harness the strategic power of social media marketing.

Undertaking

I certify that the project [**Name of Project**] is our own work. The work has not, in whole or in part, been presented elsewhere for assessment. Where material has been used from other sources it has been properly acknowledged/ referred.

[Name of Student]

[Roll-No]

[Name of Student]

[Roll-No]

Acknowledgement

We truly acknowledge the cooperation and help make by [**Name of Acknowledger**], **Designation** of [**Address of Organization**]. He has been a constant source of guidance throughout the course of this project. We would also like to thank [**Name of Acknowledger**] from [**Designation**], [**Address of Organization**] for his help and guidance throughout this project.

We are also thankful to our friends and families whose silent support led us to complete our project.

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List of Acronyms

AWS	Amazon Web Services
S3	Simple Storage System
GCP	Google Cloud Platform

List of Equations

Equation 1:Expansion of sum

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Chapter 1

1.1 Introduction

1.2 Statement of the problem

1.3 Goals/Aims & Objectives

1.4 Motivation

1.5 Assumption and Dependencies

1.6 Methods

1.7 Report Overview

Chapter 2

2.1 Heading

Headings and subheadings provide structure to a document. They signal what each section is about and allow for easy navigation of the document. Use a hierarchical structure for headings and sub headings.



Figure 1: Computer System

2.1.1 Heading

2.1.2 Heading

Chapter 3

3.1 Heading

3.1.1 Mathematical Equation

$$(1 + x)^n = 1 + \frac{nx}{1!} + \frac{n(n-1)x^2}{2!} + \dots$$

Equation 1: Expansion of sum

3.1.2 Heading



Figure 2: Computer System

Chapter 4

4.1 Proposed Solution/Results & Discussion

Your proposed solution should relate the current situation to a desired result and describe the benefits that will accrue when the desired result is achieved. So, begin your proposed solution by briefly describing this desired result.

Activity	Optimistic (a)	Most Likely (m)	Pessimistic (b)	Expected (Te)
A	21	23	25	23
B	0.5	1	1.5	1
B	0.5	1	1.5	1

Table 1: PERT Activity Time estimate table

Chapter 5

6.1 Summary and Future work

A summary of a thesis/project is like an abstract of a research paper. Basically, the purpose of the summary is to give the reader an overview of the main points of your thesis/project. Generally, the summary is about 200-350 words. The summary should include the following points:

1. What is the thesis about?
2. What is the purpose of the project/thesis?
3. What were the methods used to research the information?
4. What are the results, conclusions, and recommendations that the thesis presents?

The future work section is a place for you to explain to your readers where you think the results can lead you. What do you think are the next steps to take? What other questions do your results raise? Do you think certain paths seem to be more promising than others?

Chapter 6

7.1 Conclusion & Recommendation

Conclusions are the last section people read in your paper, and therefore it is what they leave remembering. You need to make sure they walk away thinking about your paper/project just the way you want them to. Your conclusions need to do three main things:

1. Recap what you did. In about one paragraph recap what your research question was and how you tackled it.
2. Highlight the big accomplishments. Spend another paragraph explaining the highlights of your results. These are the main results you want the reader to remember after they put down the paper, so ignore any small details.
3. Conclude. Finally, finish off with a sentence or two that wraps up your paper. I find this can often be the hardest part to write. You want the paper to feel finished after they read these. One way to do this, is to try and tie your research to the “real world.” Can you somehow relate how your research is important outside of academia? Or, if your results leave you with a big question, finish with that. Put it out there for the reader to think about.

References

References are to be placed in square brackets and interlaced in the text. For example, "A comprehensive detail of how to prevent accidents and losses caused by technology can be found in the literature [1]. A project report / thesis cannot be accepted without proper references. The references shall be quoted in the following format:

The articles from journals, books, and magazines are written as:

- [1] Abe, M., S. Nakamura, K. Shikano, and H. Kuwabara. Voice conversion through vector quantization. *Journal of the Acoustical Society of Japan*, April 1990, E-11 pp 71-76.
- [2] Hermansky, H. Perceptual linear predictive (PLP) analysis for speech. *Journal of the Acoustical Society of America*, January 1990, pp 1738-1752.

The books are written as:

- [1] Nancy G. Leveson, *Safeware System Safety and Computers, A guide to preventing accidents and losses caused by technology*, Addison-Wesley Publishing Company, Inc. America, 1995.
- [2] Richard R. Brooks, S. S. Iyengar, *Multi-Sensor Fusion Fundamentals and Applications with Software*, The Prentice-Hall Inc. London, 1998.

The Internet links shall be complete URLs to the final article.

- [1] <http://www.pu.edu.pk/ucit/projects/seminars.html>

Annexure

Annexure (if any) should be placed at the end of the project report.

General Guidelines for Writing Project's Thesis

For convenient upload on PEC's e-Library

Page Setup

Page Size:	A4
Top margin:	1.00 inch or 2.54 cm
Bottom margin:	1.00 inch or 2.54 cm
Left margin:	1.00 inch or 2.54 cm
Right margin:	1.00 inch or 2.54 cm

Fonts and Styles:

Use a standard font such as Times New Roman, Arial, or Calibri

Font size should be 12 points for the main text.

Use consistent font sizes and styles (bold, italics) for headings, subheadings, and content.

Footer:

Each page shall have a footnote "Page number, right align".

Header:

Each page shall have a header "Project/Thesis Title".

Chapter Startup:

Each chapter shall be numbered as Chapter 1, Chapter 2, etc.

Paragraph Formatting:

Single-spaced, Line entered paragraph, left align or justified.

Line Spacing:

1.5 spacing is required for the text. Only footnotes, long quotations, bibliography entries (double space between entries), table captions, and similar special material may be single spaced.

Maintain consistent spacing between paragraphs

Images, Figures, Hyperlink:

Ensure that images, figures, and hyperlink are of high quality and are properly labeled.

Tables and Equations:

Format tables with clear column and row headings.

Provide captions for each Table.

Label equations and provide clear explanations.

Citations and References:

Follow a standardized citation style (e.g., APA, MLA, PEC etc.) for references.

Include a separate references section at the end of the document.

File Naming Convention:

Submitted files are named with a clear and concise title that reflects the content of the paper or thesis.