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**The Islamic Universityof Gaza**

**Faculty of Information Technology**

**Department of Software Developmemt**

**الجـامعــــــــــة الإســـــلاميــة بغــزة**

**كلية تكنولوجيا المعلومات  
قسم تطوير البرمجيات**

**AI-Powered Market Analysis Website**

**موقع دراسات تحليل السوق بتقنية الذكاء الاصطناعي**

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**A graduation project report submitted in partial**

**fulfillment of the requirements for the degree of**

**Bachelor of Information Technolgy**

**2/2025**

**Abstract**

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(Within one page)

**This Abstract should be written in a paragraph base not as points bases.**

This template is in the correct format - just type over it and save it as your document.

The first item in your thesis should be an abstract of a few short paragraphs (within one page) summarising the thesis.

It is suggested that the abstract be structured as follows:

**Problem:** What you tackled, and why this needed a solution

**Objectives and aims:** What you set out to achieve, and how this addressed the problem

**Methodology:** How you went about solving the problem

**Results:** What you managed to achieve, and how far it meets your objectives.

**Conclusions & Recommendations:** The most important finding (in one or two sentences)

From the abstract, a reader should be able to ascertain if the project is of interest to her/him.

**ملخص الدراسة**

**إنّ إعداد خطط أعمال ناجحة لعمل تجاري، يتطلب فهمًا عميقًا لعوامل نجاح الأعمال الأساسية، فهي فلسفة منهجية للتعمق في خبايا الفكرة والمشروع، وتحليل سوق المنافسة لاستلهام الأفكار منه والاستفادة من معطياته، وأنها أفضل خارطة طريق لإثبات جدوى الفكرة والتحفيز على العمل عليها حتى تغدو واقعًا ملموسًا.  
دراسة تحليل السوق هي إحدى أهم الدراسات لأصحاب الأعمال والشركات قبل الخوض في سوق العمل، لتحقيق النجاح في أعمالهم، حيث أن الفهم العميق لحالة السوق يمكّنهم من موائمة أنفسهم في السوق والاندماج مع متغيراته. إنّ إجراء دراسة تحليل السوق بالطرق التقليدية يتستلزم وصولًا واسعًا للموارد اللازمة، ومهارات وإمكانيات البحث والتقرير والتعامل مع الأرقام وفهم متغيرات السوق واحتمالاته واتجاهاته. وكما يواجه الباحثين صعوبات لتجهيز وثائق الأعمال المختلفة، فإن ريادي الأعمال قد يواجهون صعوبات متعددة أثناء إجراء دراسة السوق، يعزى ذلك غالبًا لنقص الخبرة والإرشاد، ومحدودية الوصول للموارد اللازمة. هذه التحديات وغيرها، قد تعوّق قدرتهم على تحليل مستجدات السوق وفهم حالته، وفهم احتياجات العملاء، وسوق المنافسة. يهدف هذا المشروع لتقديم موقع الكتروني يرتكز على خدمات الذكاء الاصطناعي، بتوفير واجهة متحدث ذكي، يقوم من خلال محادثة سلسة وبمدخلات بسيطة من المستخدم بمساعدته في إجراء عملية دراسة السوق، في وقت قياسي، ووصول واسع لكافة ما يلزم من مصادر ومراجع، وتقديم بعض التوجيهات والنصائح لصاحب هذه الفكرة.**

# Epigraph Page

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# Dedication

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# Acknowledgment

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# Table of Contents

(Automatic Table of Contents (

[Epigraph Page IV](#_Toc61265402)

[Dedication V](#_Toc61265403)

[Acknowledgment VI](#_Toc61265404)

[Table of Contents VII](#_Toc61265405)

[List of Tables VIII](#_Toc61265406)

[List of Figures IX](#_Toc61265407)

[List of Abbreviations X](#_Toc61265408)

[يتم عمل مرآة فصل لجميع الفصول 1](#_Toc61265409)

[Chapter 1 Introduction 1](#_Toc61265410)

[Chapter 1 Introduction 2](#_Toc61265411)

[1.1 Problem Statement 2](#_Toc61265412)

[1.2 Objectives 2](#_Toc61265413)

[1.2.1 Main Objective 2](#_Toc61265414)

[1.2.2 Sub Objectives 2](#_Toc61265415)

[1.3 Scope and Limitations 2](#_Toc61265416)

[1.4 Importance of the project 3](#_Toc61265417)

[1.5 Methodology 3](#_Toc61265418)

[1.6 Tools and equipment 3](#_Toc61265419)

[1.7 Time Table 3](#_Toc61265420)

[Chapter 2 Literature Review 4](#_Toc61265421)

[Chapter 3 Methodology 5](#_Toc61265422)

[في هذه المرحلة يتم تقسيم المنهجية الى شباتر منفصلة حسب طبيعة المشروع والمنهجية المتبعة 5](#_Toc61265423)

[Chapter # Testing and Evaluation 5](#_Toc61265424)

[Chapter # Conclusions (and/or Recommendations) 6](#_Toc61265425)

[The Reference List 7](#_Toc61265426)

[Appendix 1: Information on Appendices 8](#_Toc61265427)

# List of Tables

[Table (3.1): Percentage of resistance of Enterococci strains isolated from different locations at Gaza strip shoreline to six antimicrobial (%) 3](#_Toc445643456)

[Table (3.2): Test cases runner customization parameters. 3](#_Toc445643457)

# List of Figures

[**Figure (3.1):** Islamic University of Gaza (IUG). 5](#_Toc438557984)

# List of Abbreviations

|  |  |
| --- | --- |
| **CUT** | Class Under Test |
| **RTS** | Regression Test Selection |
| **SUT** | System Under Test |
| **TDD** | Test Driven Development |
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\*Note: Sort Alphapiticaly

**Chapter 1  
Introduction**

# Chapter 1 Introduction

This chapter is the start of the main body of the projet and should be numbered page 1. Each new chapter should start in a new page. Chapters are entered using the Heading 1 paragraph style. The Heading 1 style automatically moves to the start of a new page, and supplies the next chapter number.

Use the Body Text paragraph style (like this one, with 11 point Times New Roman, 1.5 line spacing, single-sided pages). If you need to use quotes, preferably use single curly quotes ‘…’. If you wish to emphasise something, usually use italic font.

This chapter should include information about the following:

Give the background to your project and context of what you have done to set the scene for the project and grap the reader’s interest early. Sections are entered using the Heading 2 paragraph style – the Heading 2 style automatically supplies the next section number.

## 1.1 Problem Statement

One critical business plan for entrepreneurs and startups pursuing business success is Market Study Analysis, helping them not only to understand the market but also to test the market feasibility of the project. Understanding the market is critical for startups and entrepreneurs seeking to build sustainable and successful businesses. It provides insights into market trends, customer needs, and competitive dynamics, helping businesses to fit themselves in the competitive market, adapt, and grow efficiently. However, traditional methods of conducting market analysis often pose some challenges. These include limited access to resources and tools, lack of experience, and the time-consuming process of gathering and evaluating large volumes of data. As a result, many startups usually struggle to analyze market trends effectively, identify customer needs, and assess competition, hindering their ability to make informed decisions and achieve economic growth.

## 1.2 Objectives

### 1.2.1 Main Objective

The main objective of this application is to simplify the process of conducting market research studies for users, saving them time, money, and effort. This is achieved by providing an intelligent chatbot capable of handling user inputs and delivering meaningful insights about market size and trends, brief competitor analysis, and SWOT analysis.

### 1.2.2 Sub Objectives

 sub goals that contribute to achieve the main goal are: 

* Setting up a Python development environment to connect to the LLM API.
* Defining the project's scope, functionalities, and technical tools.
* Leveraging search engines to supply the LLM with real-time, up-to-date information.
* Integrating a search engine API with the LLM API.
* Developing a chatbot interface using the Gradio framework to facilitate user interaction.
* Establishing a predefined query format and a market analysis study structure to improve user input processing and response accuracy.

## 1.3 [Scope](http://www.cs.stir.ac.uk/~kjt/research/conformed.html) and Limitations

Define the scope and limitation of the project.

## 1.4 Importance of the project

This website provides easily accessible solution to facilitate conducting market analysis study…

## 1.5 Methodology

## 1.6 Tools and equipment

## 1.7 Time Table

|  |  |  |  |
| --- | --- | --- | --- |
| Notes | Activity | duration | Week |
|  | Business Understanding, Requirements Specification, team formulation | 20 October – 25 October | Week 1 |
| Python Gradio, HuggingFace transformer models, RAG technology, markdown techniques | Determining the development environment, tools and tchniques | 26 October – 1 November | Week 2 |
| Data for the RAG | Testing existing LLMs capabilities in the domain specific case, Collecting relevant data and resources | 2 November – 22 November | Week 3, 4, and 5 |
| Deliver first snippet of code | Search Engine APIs integration to LLM APIs | 23 November – 6 December | Week 6 and 7 |
|  | Developing gradio interface application for conversational flow interaction with the user | Gradio application application development | Week 8 and 9 |
|  |  |  |  |
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# Chapter 2 Related Works

It should include reviews of previous work by others that are relevant to the project. A review does NOT mean reproducing in details material given in text books, reports and papers. It DOES mean summarizing the information (with pointing to the references) so that a reader is informed of where to look for the information.

Everything that you write must be your own words and you must cite other people using references.

**Summarize the differences between your project and other related reviewed projects.**

**Chapter 3  
Introduction to Agile Methodology**

# Chapter 3 Introduction to Agile Methodology

Given understanding of the project's purpose to develop a website based on the artificial intelligence to help users conduct a market study analysis, the work on the project had to be divided from the beginning into several phases; first, it was necessary to understand the field of work more broadly and understand the real need of the user for business plans and market analysis, how to conduct these tasks properly, and the problems they face when working on them. Then moving to technical aspects and the chatbot development process. We adopted in our work the agile methodology as it is the most appropriate for the workflow and the steps of developing the idea and the project.  
The Agile approach has several characteristics that make the development process simply more "Agile". It has been adopted in many of the software development processes to help software developers achieve their objectives by flexibility in accommodating changes at any time of the development process, teafocusing of the development process more than the documentation, iteratively releasing project phases, and delivering products on time.

**Chapter 4**

**Sprint 0**

**Project Initiation**

# Chapter 4 Sprint 0 Project Initiation

## 4.1 Sprint Objectives

Planning for the project, clarifying tasks, forming team

## 4.2 Activities:

* Identify stakeholders.
* Establish the project scope and requirements.

## 4.3 Deliverables

# Chapter # Conclusions and future works

Summarise and analyse what you have achieved.

# The Reference List

Indentation (Hanging By 0.63 cm)

This has the following purposes:

1. To acknowledge the source of material being used.
2. To tell the reader where the confirmation of statements that you have made can be found.
3. To tell the reader where a more extensive or more detailed discussion of the subject (or related subject) can be found.

# Appendix 1: Information on Appendices

Appendices may be provided to include further details of results, mathematical derivations, certain illustrative parts of program code (e.g. class interfaces), user documentation, log of project milestones.  In particular, if there are technical details of the work done that might be useful to others who wish to build on this work, but that are not sufficiently important to the project as a whole to justify being discussed in the main body of the thesis, then they should be included as appendices.

There is **no expectation** that the examiners should read the appendices as part of the assessment process.  Hence, it is important that any material which will be significant to judging the quality of the thesis or of the project as a whole should be in the main body of the thesis, and not in appendices.