

## CHAPTER 1 INTRODUCTION

### 1.1. Background

The Qur'an is often regarded as a book containing a wealth of knowledge, both in the spiritual and scientific fields. One of its miraculous aspects is its ability to provide guidance on scientific phenomena that remain relevant throughout the ages.<sup>1</sup> In Q.S. Fuṣṣilat (41:53), Allah says:

سَنُرِيهِمْ آيَاتِنَا فِي الْأَفَاقِ وَفِي أَنْفُسِهِمْ حَتَّىٰ يَتَبَيَّنَ لَهُمْ أَنَّهُ الْحَقُّ أَوَلَمْ يَكْفِ بِرَبِّكَ أَنَّهُ عَلَىٰ كُلِّ شَيْءٍ شَهِيدٌ

*Meaning : "We will show them Our signs in all corners of the earth and within themselves, so that it will become clear to them that (the Qur'an) is the truth. Is it not enough (for you) that your Lord is a witness to all things?" (Q.S. Fuṣṣilat 41:53)*

History records that scientific interpretation of the Qur'an has developed since the era of Al-Ghazali and Fakhrudin Al-Razi, continuing into the modern era through figures such as Muhammad Abduh, Rashid Rida, and Zaghlul Al-Najjar. In Indonesia, this approach began to be introduced in the 1960s and has continued to develop through the works of academics such as Hasbi Ash-Shiddieqy and Ahmad Baiquni. Scientific interpretation projects have also been developed by the Indonesian Ministry of Religious Affairs and LIPI.<sup>2</sup>

This phenomenon demonstrates the importance of integrating religion and science. Islam, as a universal religion, encompasses all aspects of life, including science and technology. According to Muqoyyidin<sup>3</sup>, religious knowledge and science must complement each other in order to understand the complexity of life. Muslih<sup>4</sup> emphasises that science cannot be completely separated from cultural and religious influences, as its development is also influenced by social and historical aspects. Meanwhile, Muhammad et al.<sup>5</sup> cite M. Amin

<sup>1</sup> Moh. Bakir, 'Paradigma Kontektualisasi Tafsir Berbasis Sains (I'jaz Al-Qur'an Dalam Paradigma Epistemologi Modern', *At-Ta'Lim*, 1.1 (2016), 11–48 <<https://ejournal.unwmataaram.ac.id/index.php/taklim/article/view/413>>.

<sup>2</sup> Aqdi Rofiq Asnawi, Syukron Affani, and Zaenatul Hakamah, 'Scientific Qur'Ānic Exegesis in Indonesia: Contributions By Scholars, Institutions, and the Government', *Australian Journal of Islamic Studies*, 6.4 (2021), 25–46 <<https://doi.org/10.55831/ajis.v6i4.401>>.

<sup>3</sup> Andik Wahyun Muqoyyidin, 'Integrasi Dan Interkoneksi Ilmu-Ilmu Agama Dan Sains Menuju Pendidikan Tinggi Islam Center of Excellences', *Edusentris*, 1.2 (2014), 171 <<https://doi.org/10.17509/edusentris.v1i2.143>>.

<sup>4</sup> Mohammad Muslih, 'Pengaruh Budaya Dan Agama Terhadap Sains Sebuah Survey Kritis', *Tsaqafah*, 6.2 (2010), 225 <<https://doi.org/10.21111/tsaqafah.v6i2.119>>.

<sup>5</sup> Ilham Muhammad and others, 'Integrasi Agama Dan Sains Dalam Perspektif M. Amin Abdullah', *Jurnal Review Pendidikan Dan Pengajaran*, 8.4 (2025), 1 <<http://journal.universitaspahlawan.ac.id/index.php/jrpp>>.

Abdullah, who asserts that a dynamic understanding of religion can foster constructive dialogue between religion and science, enabling adaptation to scientific advancements without abandoning religious values.

However, in this modern era, a major challenge comes from the influence of secularism. Secularisation has led to the fragmentation of knowledge and eroded spiritual values in the world of education. Science and religion are strictly separated, creating a dichotomy that contradicts the principle of tawhid. However, from an Islamic epistemological perspective, the integration of science and religion is inevitable, as both originate from divine revelation and the creation of Allah.<sup>6</sup> In the context of Islamic higher education, the integration of science and religion is becoming increasingly important in order to respond to contemporary challenges and build a scientific paradigm that is not only rational but also grounded in spiritual values.<sup>7</sup>

In addition, another major challenge in scientific interpretation studies is the limited access to literature related to this topic.<sup>8</sup> Previously, scientific interpretations were mostly available in written form, such as PDFs or books. Although PDFs are already digitized and searchable, navigation within these documents is limited and inefficient for finding specific information.<sup>9</sup>

Digitization through websites is a more significant solution, as it allows scientific exegesis to be presented in a more structured and interactive format. With websites, access to scientific exegesis becomes more open and easier, reducing the limitations of space and time that previously hindered it, and making it easier for users to find and understand exegesis based on specific scientific themes.<sup>10</sup>

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<sup>6</sup> Abdul Hafidz Nasir and Ma'mun Hanif, 'Integration of Science and Religious Sciences Its Implications for Islamic Religious Education', in *International Conference on Islamic Studies*, 2022, pp. 118–27 <<https://proceeding.uingusdur.ac.id/index.php/icis/article/view/880%0Ahttps://proceeding.uingusdur.ac.id/index.php/icis/article/download/880/373>>.

<sup>7</sup> Tursinawati Tursinawati and others, 'The Integration of the Nature of Science and Religion to Increase Students' Religious Beliefs in Acquiring Scientific Knowledge at the Elementary School', *Jurnal Prima Edukasia*, 12.1 (2024), 140–55 <<https://doi.org/10.21831/jpe.v12i1.67649>>.

<sup>8</sup> Mohamad Rian Liputo, Abdullah Sakka, and Muh Arif, 'Metodologi Dalam Studi Islam: Tantangan Dan Peluang', *Jurnal At-Tarbiyah : Jurnal Pendidikan Islam*, 9439 (2024), 161–78.

<sup>9</sup> Nancy C. Goodwin, 'Functionality and Usability', *Communications of the ACM*, 30.3 (1987), 229–33 <<https://doi.org/10.1145/214748.214758>>.

<sup>10</sup> Sihabussalam, Sa'adatul Lailah, and Roma Wijaya, 'Digital Era Qur'anic Interpretation In Indonesia : Influence and Development on Contemporary Tafsir', *Suhuf: Jurnal Pengkajian Al-Qur'an Dan Budaya*, 17.1 (2024) <<https://doi.org/https://doi.org/10.22548/shf.v17i1.998>>.



According to research<sup>11</sup>, scientific publications related to digital interpretation have grown by 3.86% per year, indicating that the digitization of interpretation has become an academic and social necessity. Digitization through various platforms makes the study of the Qur'an more open and accessible. One of the main media for digitization is websites.<sup>12</sup>

Based on the results of searches conducted using Google and Microsoft Bing search engines with three variations of keywords, namely 'Tafsir Sains', 'Tafsir Ilmi', and 'Website Tafsir Sains Al-Qur'an', at the time of writing this research (24 August 2025), no website in Indonesia has been found that specifically manages and presents scientific exegesis of the Qur'an. Existing websites generally still provide general interpretations and do not yet provide classifications of verses based on scientific themes. This finding indicates a need to develop a scientific exegesis website in Indonesia.

In implementing the digitization of scientific exegesis of the Qur'an, a system is needed that is capable of managing exegesis data properly and providing optimal accessibility. One relevant approach in developing a web-based digital platform is the Model-View-Controller (MVC) architecture, which allows for the separation of business logic, interface display, and user interaction processes.<sup>13</sup>

MVC architecture is the primary choice in web-based application development because it improves modularity and ease of system maintenance. This approach has been used in various information system development projects, including tourist ticket booking systems<sup>14</sup>, e-commerce applications<sup>15</sup>, and Laravel-based academic information systems.<sup>16</sup> The advantage of MVC lies in its ability to separate the main components of an application, allowing developers to more easily repair, develop, and improve application performance.<sup>17</sup>

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<sup>11</sup> Umi Fadhilah, Kharis Nugroho, and Alfiyatul Azizah, 'Development of Al-Qur ' an Interpretation Research in the Digital Era : Bibliometric Approach with R for Statistical Computing', 2021, 1498–1509.

<sup>12</sup> Muhamad Yoga Firdaus, 'Digitalisasi Khazanah Ilmu Al-Qur'an Dan Tafsir Di Era Digital: Studi Analisis Pada Website Tanwir.Id', *Reslaj: Religion Education Social Laa Roiba Journal*, 5.6 (2023), 2710–16 <<https://doi.org/10.47476/as.v5i6.2552>>.

<sup>13</sup> Abdul Majeed and Ibtisam Rauf, 'MVC Architecture: A Detailed Insight to the Modern Web Applications Development', *Peer Review Journal of Solar & Photoenergy Systems*, 1.1 (2018), 1–7.

<sup>14</sup> Iqbal Ramadhani Mukhlis and Alya Rizky Natasya, 'Sistem Informasi Pemesanan Tiket Wisata Kota Surabaya Berbasis Web Menggunakan Metode Model View Controller', *Informatech : Jurnal Ilmiah Informatika Dan Komputer*, 1.1 (2024), 1–9 <<https://doi.org/10.69533/bfb9x126>>.

<sup>15</sup> SYuniastari. N. L. A. K. Suharsana, I. K., Wirawan, .JGP. W. W., 'Implementasi Model View Controller Dengan Framework Codeigniter Pada E-Commerce Penjualan Kerajinan Bali', *Jurnal Sistem Dan Informatika*, 11.1 (2016), 19–28.

<sup>16</sup> Khana Wijaya and Andi Christian, 'Implementasi Metode Model View Controller (MVC) Dalam Rancang Bangun Website SMK Yayasan Bakti Prabumulih', *Paradigma - Jurnal Komputer Dan Informatika*, 21.1 (2019), 95–102 <<https://doi.org/10.31294/p.v21i1.5092>>.

<sup>17</sup> Mukhlis and Natasya.

This study aims to develop a Laravel-based digital scientific exegesis website by applying MVC architecture. This website will provide various verses from the Qur'an classified according to scientific themes, taken from sources such as :

- *Tafsīr al-Āyāt al-Kawniyyah fī al-Qur'ān al-Karīm* by Zaghlul Al-Najjar.<sup>18</sup>
- *Tafsir* Book from the Indonesian Ministry of Religious Affairs.<sup>19</sup>
- *Bahan Ajar Tafsir BERSAQURAL (Berbasis Sains, Al-Qur'an dan Alam)* by Budiyo Saputro, Muh Zuhri, and Mansur.<sup>20</sup>
- *Al-I'jāz al- 'Ilmī fī al-Qur'ān wa al-Sunnah* by Abdullāh bin 'Abd al- 'Azīz al-Muṣliḥ.<sup>21</sup>
- *Quranic Science* by Afzalur Rahman.<sup>22</sup>

Through the development of this website, it is hoped that a systematic, interactive, and easy-to-use medium will be created to support the integration of religion and science, particularly in the context of education in the digital age.

## 1.2. Problem Formulation

Based on the background described above, the problem formulation in this study is the limited access to scientific exegesis literature on the Qur'an to support the integration of religion and science in the digital age, particularly in the context of education at Islamic universities in Indonesia.

## 1.3. Research Objectives

This study aims to develop a website based on Model-View-Controller (MVC) architecture with the Laravel framework that specifically manages and presents scientific exegesis of the Qur'an.

## 1.4. Problem Limitation

In this research, there are several limitations that need to be considered, including:

<sup>18</sup> Zaghlul Al-Najjar, *Tafsīr Al-Āyāt Al-Kawniyyah Fī Al-Qur'ān Al-Karīm* (Maktabatu al-Syurūq al-Dauliyyah, 2007).

<sup>19</sup> Tim Penyusun, 'Koleksi Tafsir Ilmu', *Lajnah Pentashihan Mushaf Al-Qur'an Kemenag RI* <<https://pustakalajnah.kemenag.go.id/koleksi?kategori=tafsir-ilmu>> [accessed 20 February 2025].

<sup>20</sup> Budiyo Saputro, Muh Zuhri, and Mansur, *Bahan Ajar Tafsir BERSAQURAL (Berbasis Sains, Al-Qur'an dan Alam)* (Lamongan: Academia Publication, 2020).

<sup>21</sup> Abdullāh bin 'Abd al- 'Azīz Al-Muṣliḥ, *Al-I'jāz Al- 'Ilmī Fī Al-Qur'ān Wa Al-Sunnah* (Mekah: al-Hay'ah al-Ālamiyyah li al-I'jāz al- 'Ilmī fī al-Qur'ān wa al-Sunnah - Rābi'atu al-Ālam al-Islāmī, 2014).

<sup>22</sup> Afzalur Rahman, *Qur'anic Science* (Peace Publications Lahore, 2017).

1. The website developed only contains scientific exegesis of the Qur'an without covering classical or other thematic exegesis.
2. The website development was carried out using the Laravel framework by applying the Model-View-Controller (MVC) architecture pattern.
3. The website is designed to support the integration of religion and science in the context of education at Islamic universities in Indonesia.
4. The scientific exegesis content displayed is sourced from scientific literature and published exegesis such as *Tafsir* Book from the Indonesian Ministry of Religious Affairs, *Tafsir al-Āyāt al-Kawaniyyah fī al-Qur'ān al-Karīm* by Zaghlul Al-Najjar, *Bahan Ajar Tafsir BERSAQURAL (Berbasis Sains, Al-Qur'an dan Alam)* by Budiyono Saputro, Muh Zuhri, Mansur and *Al-I'jāz al- 'Ilmī fī al-Qur'ān wa al-Sunnah* Book by Abdullāh bin 'Abd al- 'Azīz al-Muṣliḥ.

### 1.5. Benefit of Research

The expected benefits of this research are:

- a. For Researchers:
 

Providing direct experience in developing an information system based on Model-View-Controller (MVC) architecture with the Laravel framework, as well as broadening knowledge in integrating information technology with thematic interpretation of the Qur'an.
- b. For the Community:
  1. Facilitating access to scientific exegesis of the Qur'an through an interactive and informative digital platform.
  2. Providing a more modern, practical, and accessible medium for religious learning.
  3. Encouraging public interest in understanding the Qur'an from a scientific perspective with a systematic approach.
- c. For the Academic Community:
  1. Serving as a scientific reference that can be utilised in educational, teaching, and research activities at universities.
  2. Facilitating students and lecturers in accessing scientific verses of the Qur'an classified according to scientific themes.



3. Supporting the integration process between religious knowledge and science in the academic environment.
- d. For Universities:
  1. Support the development of information technology innovations that align with the vision of integrating Islamic knowledge and science.
  2. Enhancing the academic reputation of the university through research results that are beneficial to the wider community and the world of education.

### **1.6. Discussion Systematics**

This research will use the following writing systematics:

#### **CHAPTER 1 INTRODUCTION**

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- 1.2. Problem Formulation
- 1.3. Research Objectives
- 1.4. Problem Limitation Batasan Masalah
- 1.5. Benefit of Research
- 1.6. Discussion Systematics

#### **CHAPTER 2 LITERATURE REVIEW**

- 2.1. Previous Research
- 2.2. Theoretical Foundations

#### **CHAPTER 3 RESEARCH METHODOLOGY**

- 3.1. Activity Plan
- 3.2. Tools and Materials
- 3.3. Research Stages

#### **CHAPTER 4 RESULTS AND DISCUSSION**

- 4.1. Application of the Model-View-Controller
- 4.2. System Development Results
- 4.3. Testing
- 4.4. Discussion

#### **CHAPTER 5 CONCLUSION**

5.1. Conclusion

5.2. Recommendations

BIBLIOGRAPHY

ATTACHMENTS

