Research Gate

A screenshot of a computer

Description automatically generated

Appendix 9.2 Research, Publications and Professorship

Appendix 9.2.1 Future Research Plans

### Future Research Plan (2025-2029)

| **Research Topic** | **Research Objectives** | **Research Significance** | **Projected Start Date** | **Projected End Date** |
| --- | --- | --- | --- | --- |
| **1. AI Ethics and Regulations** | To establish guidelines for ethical AI deployment. | Ensures responsible AI use and fosters public trust. | March 2025 | December 2026 |
| **2. Machine Learning for Healthcare** | To develop predictive models for disease diagnosis. | Improves patient outcomes and healthcare efficiency. | January 2025 | June 2027 |
| **3. Quantum Computing Applications** | Explore the potential of quantum algorithms in solving complex problems in AI. | Could revolutionize problem-solving capabilities in AI and data processing. | July 2025 | December 2027 |
| **4. Web Development Frameworks Evolution** | To analyze the impact of emerging frameworks on development efficiency. | Guides developers in choosing optimal tools for modern applications. | January 2025 | December 2027 |
| **5. Robotics in Manufacturing** | To evaluate the effectiveness of robotics in enhancing productivity and safety. | Increases efficiency and reduces risks in industrial settings. | January 2026 | June 2027 |
| **6. Advanced Data Analytics Techniques** | To develop new methods for extracting insights from big data. | Enhances decision-making processes across industries. | July 2025 | December 2028 |
| **7. Cyber Security Threat Detection** | To innovate real-time threat detection systems using machine learning. | Protects organizations from evolving cyber threats. | January 2026 | December 2029 |
| **8. AI-Powered Personalization** | To design AI systems that provide personalized user experiences in e-commerce. | Improves customer satisfaction and drives sales. | January 2027 | June 2029 |

### **Gantt Chart**

**Below is a visual representation of the research plan using a Gantt chart format.**

plaintext

| Research Topic | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 |

|-------------------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|

| AI Ethics and Regulations | ██████████| | | | | |

| Machine Learning for Healthcare | ██████████| ██████ | | | | |

| Quantum Computing Applications | | ████████ | ████████ | | | |

| Web Development Frameworks Evolution | | ██████████| | | | |

| Robotics in Manufacturing | | ████████ | ██████ | | | |

| Advanced Data Analytics Techniques | | | | ██████████| ████████ | |

| Cyber Security Threat Detection | | | ██████████| ████████ | ████████ | |

| AI-Powered Personalization | | | | | ██████████| ██████ |

### Notes

* The Gantt chart represent the timeline for each research topic, with filled blocks indicating the duration of the research.