# KHR Institute of AI & Robotics: Curriculum Overview

Welcome to the KHR Institute of AI & Robotics, where we blend cutting-edge Artificial Intelligence, Robotics, and essential digital skills into a comprehensive and practical program. Our vision is to empower future innovators with the diverse expertise needed to thrive in the rapidly evolving tech landscape.



## Foundations of Artificial Intelligence & Machine Learning



#### **Core Al Concepts**

Explore search algorithms, knowledge representation, and advanced reasoning techniques that form the bedrock of artificial intelligence.



#### **Machine Learning Types**

Delve into supervised, unsupervised, and reinforcement learning, understanding their applications in real-world problem-solving.



#### **Deep Learning Essentials**

Master neural networks, Convolutional Neural Networks (CNNs), and Recurrent Neural Networks (RNNs) for complex data analysis.



#### **Key Algorithms**

Gain proficiency in essential machine learning algorithms including regression, classification, and clustering for diverse data tasks.

## Mastering Generative AI & Advanced Tools



Explore over 50 leading AI and Generative AI tools, staying ahead of industry trends.

#### Prompt Engineering Expertise

Develop advanced prompt engineering skills for creative content generation and efficient Al interaction.

#### Hands-On Practice

Gain practical experience with tools like ChatGPT, Midjourney, DALL-E, and Stability AI for diverse applications.

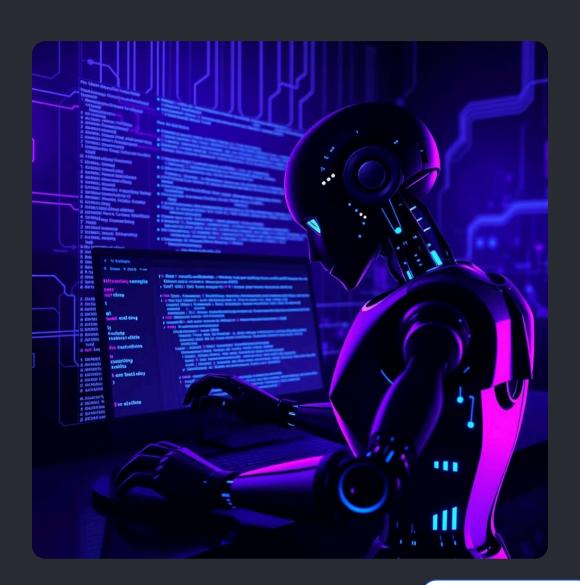
#### Al in Productivity Workflows

Integrate AI into daily tasks using tools like Notion AI and GitHub Copilot to boost productivity.

## Al-Powered Web Development & Design

Discover how AI revolutionizes web development, enabling efficient workflows and innovative designs. From generating code to optimizing user experiences, AI tools streamline the entire process.

- Leveraging AI for efficient web development workflows
- Al tools for WordPress design: theme generation, content creation
- Graphic design with AI: logo design, image manipulation (e.g., Adobe Firefly)
- UI/UX design enhanced by AI analytics and automation



## Digital Marketing Transformation with Al

4

40%

**30**%

#### **Content Marketing**

Al generates engaging blog posts and social media updates efficiently.

#### **SEO Optimization**

Al-driven keyword research and analysis enhance search rankings.

20%



10%

#### **Targeted Advertising**

Al segments audiences for highly effective, personalized campaigns.

#### **Predictive Marketing**

Al insights analyze performance and forecast future market trends.

## Applied Robotics: Raspberry Pi & Arduino Projects

#### **Embedded Systems Intro**

Learn the fundamentals of Raspberry Pi and Arduino for hands-on robotics.

#### **Sensor & Motor Control**

Integrate sensors and program motor controls for dynamic robotic functionality.

#### 10+ Robotics Projects

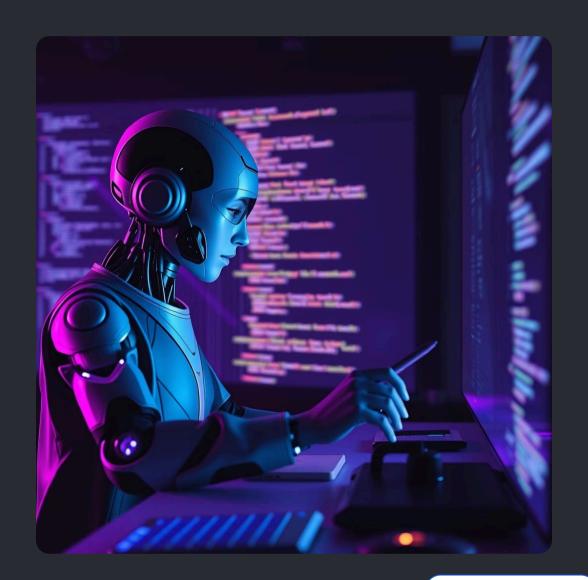
Build diverse robotics and IoT projects, from smart homes to basic autonomous systems.

#### **Automation Programming**

Develop skills in basic automation programming to bring your projects to life.

## **Al-Assisted Software Development & Automation**

- Coding websites and apps with AI assistance (e.g., GitHub Copilot, Tabnine)
- Developing intelligent bots for automation and customer service
- Building custom software solutions using Al libraries and APIs
- Streamlining development cycles with Al-driven testing and debugging



### Ethical AI, Muslim History & Science Connections

Our curriculum extends beyond technical skills to foster a holistic understanding of technology's impact and its historical context.



#### Responsible Al Development

Address bias, fairness, and transparency in AI systems.

#### **Societal Impact**

Understand Al's ethical considerations and broader implications.



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#### **Muslim Scholars' Contributions**

Explore historical advancements in science and technology by Muslim scholars.

#### **Quranic Perspectives**

Examine the relationship between Quranic teachings, knowledge, and scientific discovery.

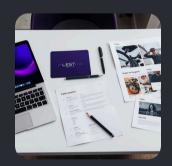


## Capstone Projects & Portfolio Development



#### **Real-World Application**

Apply your knowledge through comprehensive capstone projects that simulate industry challenges.



#### **Professional Portfolio**

Build a strong portfolio showcasing your diverse skills and innovative projects to potential employers.



#### **Collaborative Projects**

Engage in teamwork, simulating real-world industry environments and fostering essential collaboration skills.



#### **Expert Mentorship**

Receive guidance from industry experts, ensuring your projects are industry-relevant and impactful.

## KHR Institute: Your Pathway to Innovation

Join us at the KHR Institute to shape the future of AI & Robotics.

#### **Holistic Curriculum**

Gain multi-disciplinary expertise for a competitive edge.

#### **Practical Skills**

Acquire abilities for immediate career impact and growth.

#### **Ethical Leadership**

Develop responsible practices in the field of technology.

**Apply Now** 

**Contact Us** 

## Understanding Python/HTML/CSS Fundamentals



Master the core language for AI/ML development and robust backend web applications.



#### **HTML & CSS Essentials**

Build responsive and visually appealing user interfaces for Al-driven web experiences.



#### **JavaScript Proficiency**

Enable dynamic and interactive web content, including client-side AI functionalities.



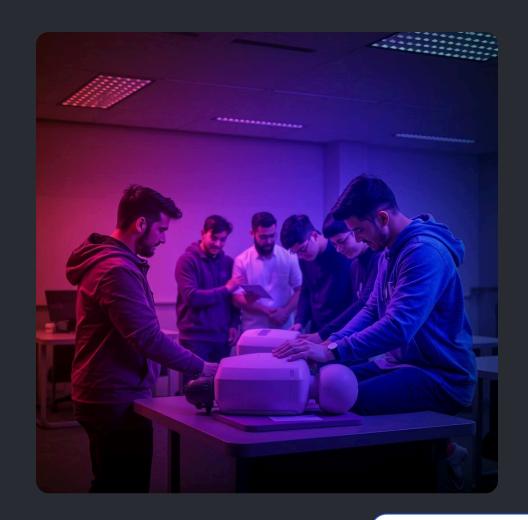
#### **Data Analytics Insights**

Utilize data to optimize web applications and refine Al models for enhanced performance.

## Essential Life Skills: First Aid & Emergency Response

Beyond technical expertise, our curriculum includes vital first aid training. Equip yourself with critical skills in emergency response, CPR, and basic medical care.

Develop the confidence to act swiftly and effectively in urgent situations, fostering responsible and prepared individuals ready for real-world challenges.



## **Empowering Diverse Talent in Tech**

At KHR Institute, we are committed to fostering an inclusive learning environment. We proudly provide comprehensive IT education to all students, including our female students scholars, empowering them with the skills and confidence to lead in the digital age.

