Research Project for Master in Data Science (MDS) and Master of Artificial Intelligence (MAI) Programs

MDS	MAI
Primarily focuses on **analyzing data and deriving actionable insights** using statistical and machine learning models.	Focuses on the **development of AI algorithms and systems** with a focus on intelligent, autonomous decision-making.
Emphasizes **traditional statistical methods, data mining, and machine learning** for data-driven predictions.	Leans towards advanced AI models, such as **neural networks, deep learning, and reinforcement learning** to create intelligent systems.
The outcome is often a **predictive model or a data-driven solution** that **aids in decision-making** for a specific domain.	The outcome is typically a working **AI system or algorithm** that can **operate autonomously** or solve complex tasks.
Projects emphasize **practical use** and real-world data applications.	Projects tend to focus on **cutting-edge techniques and their applications**.

Specific Requirements for the Master of Data Science (MDS) Research Project

The Master in Data Science (MDS) research project focuses on the application of data science techniques to extract insights from large, complex data sets. Projects should primarily deal with data analytics, statistical modeling, machine learning applications, or big data solutions.

Project Focus:

- Application of advanced data analytics, machine learning, and statistical models to a well-defined data-driven problem.
- Emphasis on data preprocessing, exploratory data analysis, and the deployment of predictive models.
- Projects may explore data visualization, interpretability of models, or decision-making based on data-driven insights.
- Integration of real-world data from various domains, such as finance, healthcare, e-commerce, or social sciences.

Example Topics:

- Predicting customer churn using classification algorithms.
- Time-series analysis for stock market prediction.

- Analyzing social media sentiment to predict public opinion.
- Optimizing supply chain operations with data-driven insights.

Specific Requirements for the Master of Artificial Intelligence (MAI) Research Project

The Master of Artificial Intelligence (MAI) research project focuses on the design, development, and implementation of AI algorithms or systems. Projects should delve deeper into the core AI technologies, such as deep learning, reinforcement learning, natural language processing, or computer vision.

Project Focus

- Research and implementation of advanced AI algorithms with a focus on creating intelligent systems.
- Projects should target areas such as deep learning models, computer vision, Natural Language Processing and reinforcement learning.
- Emphasis on algorithm development, model optimization, and exploratory innovation in AI techniques.
- Consideration of AI ethics, explainability, and potential impacts of deploying AI solutions in real-world environments.

Example Topics

- Developing a deep learning model for autonomous vehicle navigation.
- Natural language processing for real-time language translation.
- Reinforcement learning for robotics control in dynamic environments.
- Building a facial recognition system using generative adversarial networks (GANs).