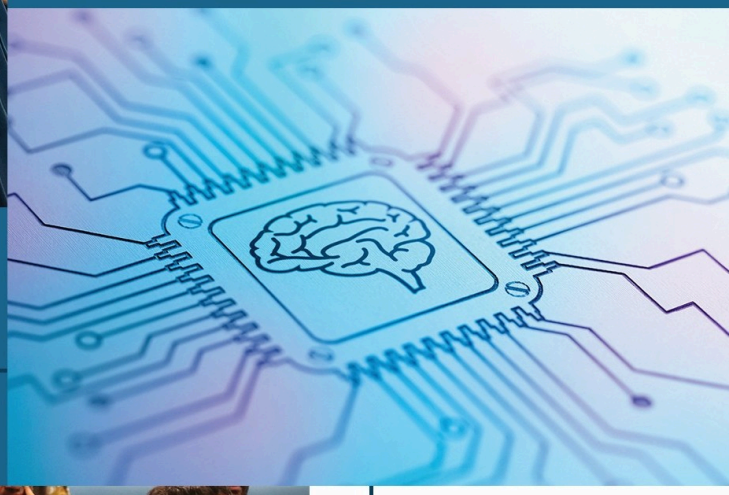
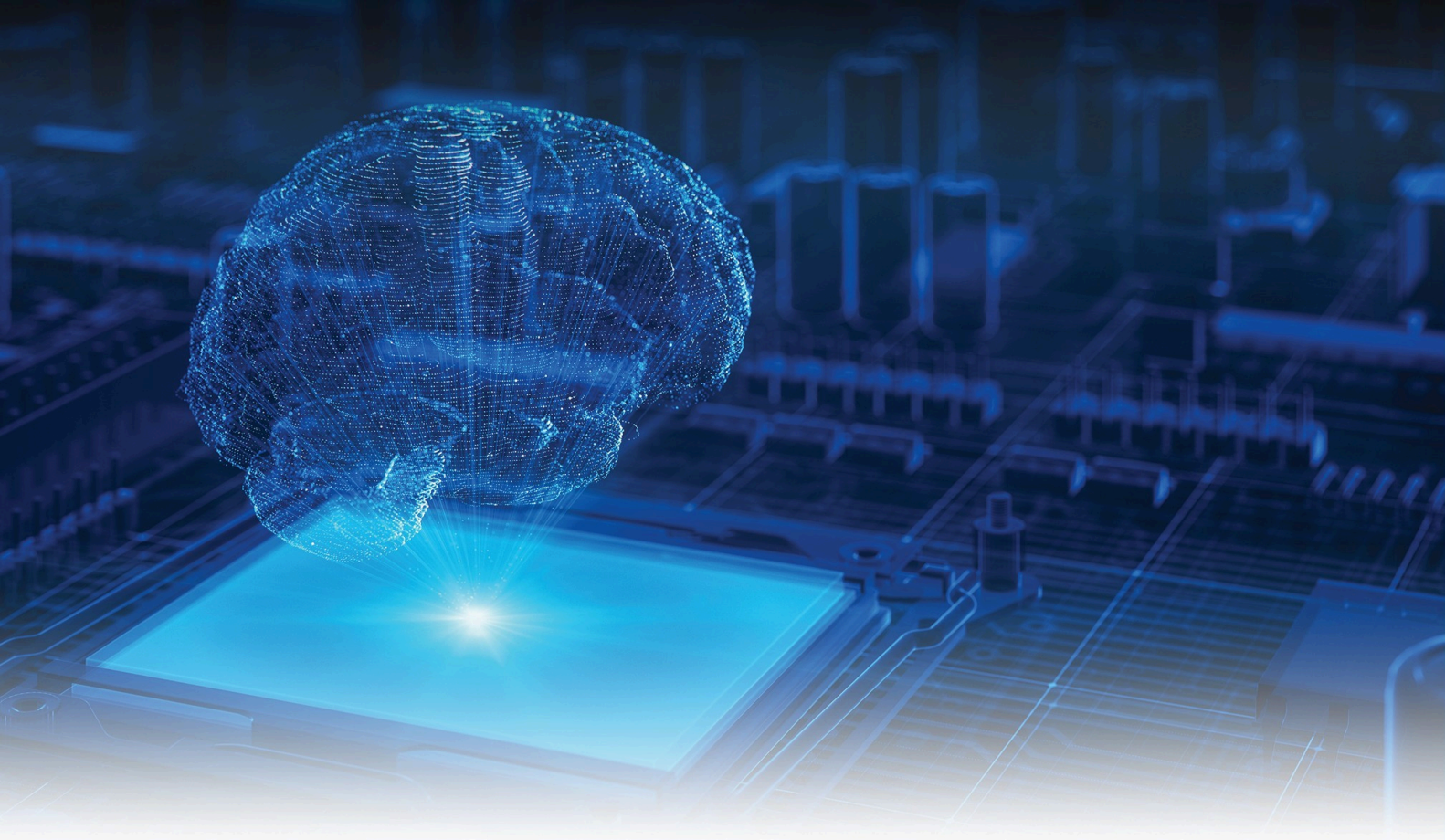
LUMS
A Not-for-Profit University



MS
ARTIFICIAL INTELLIGENCE

EMPOWERING EVERY JOURNEY

Syed Babar Ali School of Science and Engineering



SYED BABAR ALI SCHOOL OF SCIENCE AND ENGINEERING (SBASSE)

LUMS and SBASSE Fostering a Dynamic Learning Environment

Founded in 1985 as a not-for-profit, LUMS believes in making quality education accessible while breaking academic, geographic, and socio-economic barriers to enhance students' academic exposure.

SBASSE at LUMS is advancing innovative teaching and impactful research in science and technology. The MS programmes offer rigorous, professional, and research-focused training, with two pathways: MS-by-Coursework or MS-by-Thesis.

WHY MS ARTIFICIAL INTELLIGENCE AT LUMS?

The MS Artificial Intelligence programme at LUMS is designed to be a nationally recognised graduate degree, combining theoretical foundations with practical skills in AI and Machine Learning (ML). It equips students with strong problem-solving abilities, domain-specific expertise, and data handling skills applicable across various industries.

- Weekend programme
- World-class faculty
- Top-quality research
- 100% merit scholarships (tuition waiver)
- Multidisciplinary environment
- Research Assistant (RA) or Teaching Assistant (TA) opportunities

PROGRAMME STRUCTURE

The MS Artificial Intelligence programme requires a total of 30 credit hours for completion. three core courses (3 credits each) are compulsory for everyone, and the number of elective courses required to complete the degree depends on the following options:

CAPSTONE PROJECT OPTION

Students will take 6 elective courses (3 credit hours each), and undertake a capstone project (3 credit hours).

COURSEWORK OPTION

Students take 7 elective courses (3 credit hours each).

THESIS OPTION

Students will take 5 elective courses (3 credit hours each), and complete an MS thesis (6 credit hours). The MS thesis is divided into two components, MS Thesis I and II (3 credit hours each).

This programme empowers students to shape their academic journey with remarkable flexibility. Building upon a strong foundation of core courses, students can choose from an extensive range of electives to design a degree experience that aligns with their individual interests, strengths, and career aspirations. Our distinguished faculty, actively engaged in cutting-edge research across diverse AI domains, brings their expertise into the classroom through a set of carefully curated specialisations. Each specialisation offers thoughtfully designed elective courses that cater to the evolving frontiers of Artificial Intelligence, including:

- Hardware
- Sustainability
- Healthcare and Biomedical Imaging
- Energy and Power Systems
- Software Systems, DevOps, and MLOps
- Robotics
- Society
- Natural Language and Speech
- Operations/Supply Chain Management

LEARNING OUTCOMES

The programme emphasises collaboration with industry and academia on real-world challenges, while fostering awareness of the societal and ethical dimensions of AI and ML. Its learning outcomes span multiple key areas like:

- Mathematical and statistical foundations
- Computational underpinnings
- Domain-specific considerations
- Ethical guidelines for AI/ML
- Data science, visualisation, and model deployment strategies
- Effective communication and teamwork

CAREER PROSPECTS

Here are some potential career and further study options for MS AI graduates:

- Start-ups based on tools and devices developed as part of their project or thesis
- Hospitals, diagnostic labs, and clinical research centres to improve patient care
- Regulatory authorities that develop and enforce regulations
- Manufacturing industry to improve design, manufacturing, and quality control
- Study complex biological systems
- Computational tool development to deliver software tools for e-health solutions
- Energy and power sector to improve energy efficiency and reliability
- Supply chain management and optimisation
- Database management to improve performance and security
- Design and performance optimisation of hardware products.
- Doctoral studies in AI and machine learning
- Digital sustainable agriculture for decision support in water, soil and pest management, weather forecasting, climate change adaptation, crop yield maximisation, etc.

"My experience with the MS AI programme has been incredible. I have gained valuable knowledge and found myself growing into a better version of my professional and academic self. The programme's practical orientation and collaborative environment have deepened my understanding of machine learning and its real-world applications. The encouraging and inspiring faculty have guided me to explore new horizons in research and innovation. I now feel more confident, and inspired to contribute meaningfully to the evolving field of artificial intelligence.

RABIA ASLAM
MS Artificial Intelligence Student

ADMISSION CRITERIA AND FINANCIAL SUPPORT

ADMISSION IS PURELY MERIT-BASED.

Scan the code to explore eligibility, deadlines, how to apply to the MS Artificial Intelligence programme and find out how LUMS can support your academic journey.

LUMS
A Not-for-Profit University

DHA, LAHORE CANTT. 54792, LAHORE, PAKISTAN
+92-42 111-11-LUMS (5867) Ext: 2177
admissions@lums.edu.pk
www.lums.edu.pk