جامعة محمد بن زايد للذكاء الاصطناعي
MOHAMED BIN ZAYED UNIVERSITY OF ARTIFICIAL INTELLIGENCE

MBZUAI Factsheet

Background

MBZUAI was established in 2019 as an open invitation to the world. MBZUAI aims to empower students, businesses, and governments to advance AI as a global force for positive progress. As a unique institution, purpose-built to lead the world in AI research, MBZUAI seeks to be a paradise for transformative research; a cradle for the best minds in computer science; and a hub for startups and high-tech innovation.

Mission

MBZUAI strives to establish and continually evolve interdisciplinary, collaborative research and development capability in the field of AI, while educating students to be innovators and leaders with the breadth and depth of knowledge to grow technology and enterprise in the UAE and globally.

Vision

Drive excellence in knowledge creation, transfer, and use of AI to foster economic growth and position Abu Dhabi as a hub for the international AI community.

Departments

The university has five departments and 10 post-graduate (five master's and five Ph.D.) programs in:

- Computer science
- Computer vision
- Machine learning
- Natural language processing
- Robotics

An elite institution in less than five years

- MBZUAI currently ranks 18th globally in its areas of specialization – AI, computer vision (CV), machine learning (ML), natural language processing (NLP) and robotics – according to CSRankings. The university is now top ranked for computer science in the MENA region. The rankings place MBZUAI alongside institutions such as MIT, the University of California, Berkeley, ETH Zurich, Nanjing University, and the University of Washington.
- MBZUAI established the MBZUAI Incubation and Entrepreneurship Center (MIEC) in 2023 to further develop the UAE's AI ecosystem and contribute to the global development of innovation and advanced AI solutions. MIEC is engineered to catalyze AI innovation and adoption in industry – bridging gaps from the ideation stage to creating startups – through offering a series of dedicated initiatives and programs. From comprehensive entrepreneurship courses offering business knowledge and local market know-how to equipping entrepreneurs with AI engineering support through a unique venture lab model.
- The MBZUAI Institute of Foundation Models (IFM) was launched in 2023 and continues to create "first-of-its-kind" specialized LLMs to support real-world applications and use cases.
- The world's highest-quality, open-source Arabic LLM, Jais, was launched in the UAE by Core42 (formerly Inception), part of G42, Cerebras, and MBZUAI. Originally 13 billion parameters, the updated iteration has 30 billion parameters and exhibits vastly better performance.
- The MBZUAI Metaverse Center (MMC) was launched in 2023. The MMC is a full stack AI research center focused on the metaverse and is dedicated to pioneering AI-driven immersive technologies, particularly for communication, healthcare, entertainment, and education. It promises to help MBZUAI stay at the forefront of this emerging and interdisciplinary field (computer vision, generative AI, mixed reality, multimedia, and natural language processing (NLP) with a lasting impact on academia, industry, and society.
- The MBZUAI community published 992 (almost 1000) papers at AI conferences and in academic journals in 2023. Highlights include faculty and students delivering 30 papers at the International Conference on

Computer Vision (ICCV) held in Paris, France, in October, 44 papers at Empirical Methods in Natural Language Processing (EMNLP) held in Singapore in December, and 53 papers at the 37th Conference on Neural Information Processing Systems (NeurIPS) in December 2023 in New Orleans.

– The university received its first patent from the US Patent Office in 2023. The invention, an AI handwriting tool, is one of several MBZUAI faculty and students currently registered with international patent organizations.

Chairman, President, Provost, and Board of Trustees

Chairman

His Excellency Dr. Sultan Ahmed Al Jaber, Minister of Industry and Advanced Technology, Special Envoy for Climate Change, and Chairman of the MBZUAI Board of Trustees

President

Professor Eric Xing, President, and University Professor

Provost

Professor Timothy Baldwin, Provost, and Professor of Natural Language Processing

Board of Trustees

- H.E. Dr. Sultan Ahmed Al Jaber, UAE Cabinet Member and Minister of Industry and Advanced Technology and Chairman of the Board of Trustees of MBZUAI
- Sir Michael Brady, Emeritus Professor of Oncological Imaging in the Department of Oncology of the University of Oxford
- Professor Anil K. Jain, University Distinguished Professor in the Department of Computer Science and Engineering at Michigan State University
- Dr. Kai-Fu Lee, Chairman and CEO of Sinovation Ventures, and President of Sinovation Venture's Artificial Intelligence Institute
- Professor Daniela Rus, Andrew (1956) and Erna Viterbi Professor of Electrical Engineering and Computer Science and Director of the Computer Science and Artificial Intelligence Laboratory (CSAIL) at MIT
- Mr. Peng Xiao, Group CEO of Abu Dhabi-based Group 42
- H.E. Mansoor Al Mansoori, Abu Dhabi Executive Council member and chairman of the Department of Health

For more information, please visit our **website** or scan the following QR code:

Faculty members

Headed by MBZUAI President and University Professor, Professor Eric Xing, and Provost, Professor Timothy Baldwin, the university's faculty are leaders in their area of expertise. MBZUAI will continue to secure the best faculty talent from around the world to Abu Dhabi. MBZUAI currently has more than 60 faculty appointed to date; more than half whom come to Abu Dhabi from the world's top 100 AI institutions. The faculty directory is available on our website, or you can scan this QR code to view the full list:

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Student body

A total of 272 students are currently enrolled at MBZUAI; with about 20% from top 100 undergraduate institutions. The latest cohort from 2023 has 142 students representing 34 countries, with 95 studying for master's degrees and 47 pursuing Ph.D. degrees. MBZUAI has had 111 graduates to date; 90 percent of whom have remained in the UAE's AI ecosystem, including 69 working in industry and 28 pursuing further graduate studies.

The students come from more than 40 countries spanning North America, Europe, Central Asia, Latin America, Middle East, and North Africa, the Caribbean, and East and South Asia, and Sub-Saharan Africa. Emirati students make up 19% of the total student body, and female students account for approximately 28%. Reflecting the university's mission to develop, train, and retain talent for the UAE's economy, 86% of alumni to date have remained in the local AI ecosystem.

Research

MBZUAI currently has more than 100+ researchers, including postdocs, research assistants, and visiting students. MBZUAI is supporting the UAE to find solutions to the world's most challenging pressing challenges with transformative research in areas such as healthcare, education, and climate.

AI FOR HEALTH. AI FOR EDUCATION. AI FOR CLIMATE CHANGE.

Research focus: Supercharging the healthcare sector with AI

- MBZUAI has emerged as a significant force in the digital healthcare space, partnering with some of the world's most active and innovative start-ups in joint IP generation and signing agreements with Cleveland Clinic Abu Dhabi, Pure Health, Quris-AI, Infinite Brain Technologies, and Emirates Health Services in 2023.
- A research team at MBZUAI is using machine learning and computer vision to identify cardiovascular disease from CT scans. The team is collaborating with the University of Oxford on a comprehensive study to identify biomarkers indicating potential heart problems before symptoms show.
- MBZUAI has signed a partnership with BioMap, an AI model-powered life science platform, to collaborate on the application of AI protein generation capabilities to large-scale life science models to help promote sustainable development and improve human health in the Middle East.
- Faculty and researchers at MBZUAI are using a multidisciplinary AI approach to provide smart care for remote patient monitoring and reduce the burden the world's aging population is having on health networks.
- MBZUAI's research to tackle malaria focuses on accurate atmospheric modelling, robust sensing from multiple data sources, and on-the-spot AI-driven diagnosis and treatment recommendations.

Research focus: Leading the way to net zero with AI

- MBZUAI is developing solutions for energy and logistic efficiency with leading global partners including IBM and Masdar
- MBZUAI's AI operation system (AIOS) for decarbonization is making a real impact, reducing AI computing energy costs by making models smaller, faster, more efficient, and less reliant on expensive hardware for AI creation.
- In 2023, MBZUAI joined forces with IBM to establish an AI Center of Excellence to help drive sustainability across the region. One of the ways in which the Center hopes to inspire meaningful action is by monitoring, modeling, and visualizing climate change more effectively to provide decision-makers with more precise data that can be used to inform and accelerate decision-making. The partnership is working on AI-enabled solutions to detect urban heat

islands by detecting and analyzing these areas. The solution will help city planners, municipalities, and residents to mitigate the worst effects of heat islands, making cities more livable amid unpredictable weather patterns.
- A team is innovating grid efficiency in the renewable energy era. AI smart grids can optimize energy use and local energy sharing by applying a technique called federated learning to train a machine learning model, enabling it to learn about the energy usage habits of millions of users without compromising data privacy. This enables energy providers to massively increase the efficiency and reliability of energy distribution, which is vital as renewable energy from different sources enters the grid.
- MBZUAI research is at the cutting-edge of new hardware, software, algorithm, theory for AI computing to lead the greener AI movement. Recognizing the potential for high energy consumption, MBZUAI researchers are required to take the carbon footprint of AI models into account when designing them.
- An MBZUAI team is working to develop more efficient energy technologies with an approach called spiking neural networks. These are similar to artificial neural networks but are designed to function even more like the neuronal networks of the human brain. Their approach may lead to significant savings.

Research focus: AI and education

- Generative AI is ready to contribute to the transformation of education. To do so effectively, it needs to be embedded in an appropriate framework to ensure it is pedagogically useful.
- AI can personalize and democratize education and give greater access to powerful learning tools especially for disadvantaged groups and those with learning disabilities.
- MBZUAI faculty are helping to develop technology that will allow for the creation of realistic, interactive 3D avatars with applications including telepresence and enhanced learning. These avatars will be able to better convey emotions and replicate the role of a physical teacher, thus boosting learning opportunities in remote areas and regions with a shortage of teachers.
- The NLP Department is working on intelligent tutoring systems (ITS) and AI-assisted learning which can complement traditional classrooms and assist teachers with certain tasks in a globally regulated, hybrid system.

MBZUAI Executive Program (MEP)

The MBZUAI Executive Program is a 16-week, intensive experience developed to support the need for AI-savvy leaders across government, industry, academia, and beyond. The program is led by some of the top, global minds, and innovators in the AI industry, and it provides participants with a practical grounding in AI and its implications on business and policymaking.

More than 160 decision-makers including CEOs, directors general, ambassadors, and executive vice presidents have participated in the university's previous four cohorts, with a majority applying from federal government roles, and a quarter of each coming from the local public and private sector. MBZUAI will continue to offer at least one seat each to participants from non-government organizations (NGOs) as well as start-ups to increase engagement with the region's thriving small-to-medium enterprises (SMEs) sector.

MEP provides access to some of the AI industry's most respected names. These include Professor Eric Xing (MBZUAI President); Professor, Sir Michael Brady (Professor Emeritus, University of Oxford); Professor Daniela Rus (Director, MIT Computer Science and Artificial Intelligence Laboratory); Professor Michael Jordan (Pehong Chen Distinguished Professor, University of California, Berkeley) and many more.

For more details, visit our website or scan the following QR code:

Business and services

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MBZUAI offers a range of professional services supporting organizations and businesses in the UAE. Leveraging the unique expertise of its faculty, MBZUAI provides consulting services to support clients in addressing their needs and challenges. These include feasibility studies, benchmarks, and assessments, business process enhancement, as well as expert guidance and mentoring for AI startups.

The university's training services include basic and bespoke training courses to provide targeted audiences with orientation and necessary knowledge of AI, its impact on business, and how it can contribute to the advancement and enhancement of business operations.

Fast facts

STUDENT BODY

- Student-faculty ratio 4:1
- 272 from more than 40 countries
- 28% of students are women

RANKING

- Ranked among the top 20 institutions globally according to CSRankings in AI, CV, ML, NLP, and robotics

STUDENT ACHIEVEMENTS

- 2023 International Conference on Computer Vision Theory and Applications (VISAPP) 2023: Best Student Paper Award
- 2023 Alibaba Cloud AI Hackathon (GITEX): 1st, 2nd, and 3rd place
- 2023 International Government Communication Forum: University Challenge (UAEU in cooperation with Sharjah Government Communication Award): 1st place with SawabAI
- 2023 Human Phenotype Project Hackathon (MBZUAI and WIS): 1st place in Predictive Challenge
- 2023 IEEE SLT International Hackathon (held in Qatar): Best Potential Impact Project Award (Autodub) and Craziest Idea Award (Commentator Voice Synthesizer)
- 2022 MoIAT and EDGE 'Pioneers 4.0' Hackathon: 1st place
- 2022 DP World's Big Tech Project: 1st place
- 2022 Ministry of Industry and Advanced Technology (MoIAT) and EDGE Group 'Pioneers 4.0' Hackathon series: 1st place
- 2022 Cisco Sustainability Challenge: 1st place
- 2022 RTA Hackathon: 1st and 2nd place
- 2021 HackforSpace: 1st and 3rd place
- 2021 Agritech Hackathon: 1st and 2nd place
- GITEX 2021 Individual 1st place
- GITEX 2021 High Flyer program - 2nd place (team entry)
- 24th International Conference on Medical Image Computing and Computer Assisted Intervention 2021: 1st place
- ICE-21 - A virtual competition for innovation and entrepreneurship: 1st place