UMKC

UNIVERSITY OF MISSOURI
KANSAS CITY

University of Missouri-Kansas City

Artificial Intelligence and Mixed Reality Summer Program

Artificial Intelligence + Mixed Reality Program Introduction

Artificial Intelligence is not just a buzzword, it is an effective tool for future scientific research and has application in various industries. Mixed reality is a combination of virtual reality and augmented reality, which has its own absolute advantages in visualized learning, research, and production life in various industries and professions.

So what is artificial intelligence and what is mixed reality? The School of Science and Engineering (SSE) at the University of Missouri-Kansas City (UMKC) brings you to a fun journey to learn the concept and learn how to apply the knowledge to create a virtual world that you imagine.

Additionally, students can take advantage of 2 weeks to learn these two technologies were used in different industries. Artificial Intelligence and Mixed Reality have been widely used in the fields of civil engineering, geoinformatics, physics, biology, urbanization, healthcare, production, and manufacturing, as well as in the financial, marketing and communication industries.

The program is designed to broaden students' horizons and expose them to artificial intelligence and mixed reality applications in advanced enterprises and smart cities across the United States. The School of Computing and Engineering is one of the nation's top research institutions in the areas of computing, artificial intelligence, big data, and data mining. And the UMKC Big Data Center, in conjunction with four of the nation's top institutions in the area of big data, has been awarded research grants from the U.S. Science Foundation and more than 150 organizations in the industry. In addition it has the world's top scientific research achievements in cloud computing, big data, and deep learning.

I. Program Description

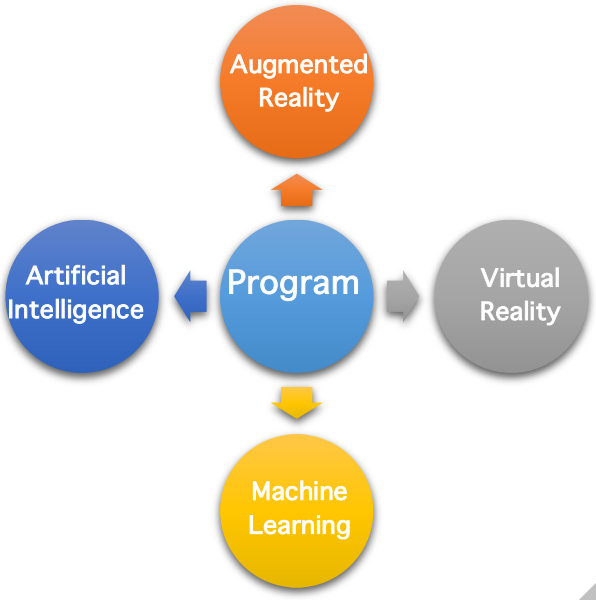
Program Duration: 2 weeks

Program Date: July 17, 2024 - July 31, 2024

Location: Kansas City, Missouri, United States

The project-oriented curriculum allows students to learn more freely according to their own learning level and interests. The curriculum is designed by the School of Science and Engineering and is taught by UMKC professors. The credit hours of the course can be transferred back to International students' home institutions to replace their internship credit hours or selective course credit hours based on mutual agreement between UMKC and its partner institutions.

The students will learn Artificial Intelligence (AI) and Mix Reality (MR) from this program. Students will work on projects which are from industry/company requests. This experience can be written on students' resume to benefit future career development or study.



• Can we have a cup of coffee with Li Bai (famous poet from China in Tang Dynasty) at Starbucks in Kansas City and chat with him about life?

• Can we talk to ourselves in the future, or will our descendants be able to talk to "me" 500 years from now?

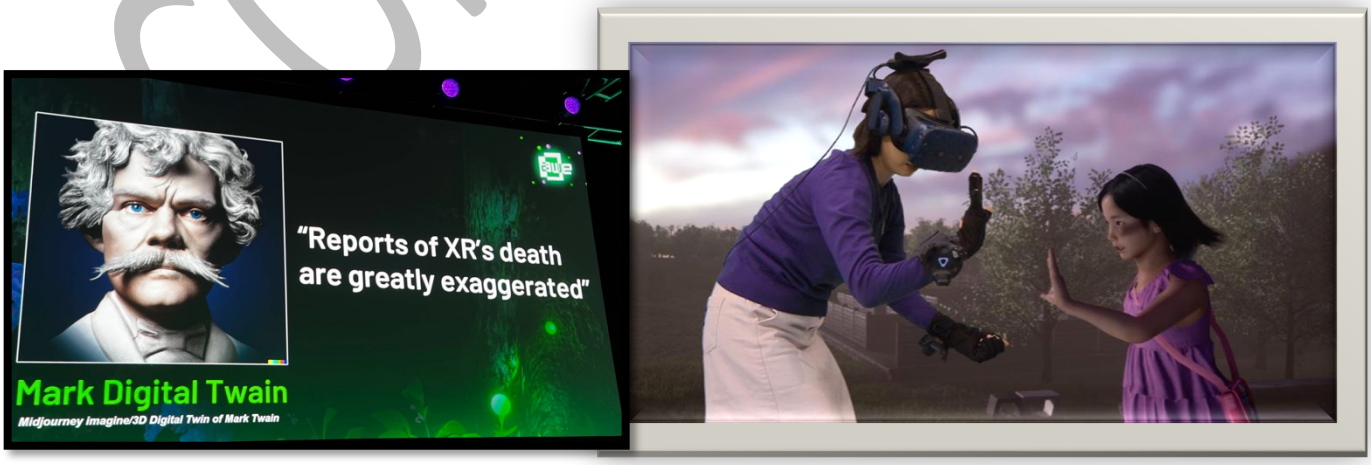
• How will our artificial intelligence and hybrid reality tech be used in the future? Can you think of more application scenarios?

This summer, are you ready to learn all of these in the U.S.?

The program also includes culture activities, operated by a third-party organization. Students will go for weekend city tours, after-school activities, baseball games, and meetings with industry experts.

U.S. company visits are organized by the School of Science and Engineering and include company tours and lectures in Kansas City.

Students learn artificial intelligence, mixed reality, and other tools and get hands-on experience during the program. The UMKC School of Science and Engineering will provide the Oculus virtual reality headsets as well as other hardware equipment and required software and environments. Students will do hands-on projects and learn in one of the best research centers in the nation!



II. Program Requirements

① Equipment Requirements

1. Computer or laptop (student must bring their own, the school will not provide)
2. Oculus virtual reality or augmented reality headset (provided by UMKC SSE)
3. 360 camera (provided by UMKC SSE) or cell phone with camera (student owned device)
4. Unity augmented reality learning environment (provided by UMKC SSE).
5. Other Artificial Intelligence tools, and materials (provided by UMKC SSE)

The above equipment and software systems are provided by UMKC SSE, except for laptops and cell phones.

② Program Objectives

Students will learn and understand the content of artificial intelligence and mixed reality, as well as virtual reality. They will complete tasks such as real-time data analysis, creating virtual environment, collecting data, and utilizing their knowledge to run their program.

Furthermore, they will utilize their knowledge of artificial intelligence to accomplish their project. The goal of working on this project is to provide students with a basic understanding of their artificial intelligence tools and mixed reality, while also encouraging their imagination, curiosity, and creativity.

Students from partner universities will learn about the research environment and classroom teaching of UMKC SSE. The program will provide students with a wide range of opportunities for future education and personal growth.

The program projects will be set as beginner, intermediate, and difficult levels. The purpose of the program is not to discourage the students by having them working on frustrated hard projects, but to encourage students accomplish challenges with the help of teaching assistants and professors. The students performance and final project will be evaluated in the end of the program. The top-performing teams in the Asian region will be sent to relevant enterprises to carry out follow-up research, technology commercialization or practical applications.

③ Additional Benefits

Students will have the opportunity to visit the city of Kansas City. They will have the opportunity to learn about the application of Machine Learning and Mixed Reality in Kansas City's Smart City Flooding Research Project, or visit U.S. companies and exchange learning with industry experts. Through experiential learning, students will learn about the application of mixed reality and artificial intelligence. Students will learn through innovative teaching methods.

Students will work together with team members, solve challenge problems, complete projects and present in the end. At the same time, students will be trained to adapt to the U.S. classroom teaching method and improve their critical thinking skills and comprehensive ability during the course. Students who excel in the program will receive the recommendation letter for their future study in the U.S. upon request. Students who complete the program successfully will receive a certificate from UMKC SSE.

III. Program Deadlines

1. Application Requirements

- Must be a current student pursuing a Bachelor's or Master's Degree from our partner institution.
- Students interested in artificial intelligence and mixed reality in all related fields such as computing, software, information management, statistics, automation, electronic engineering and information systems, engineering, structures, mechanics, digital media, physics, geotechnical engineering, civil engineering, mechanical engineering, business, marketing, industrial design, art and design, media, and fine arts.
- English proficiency: high, including speaking, listening, reading, and writing. (no TOEFL or IELTS are required).

2. Enrollment and Deadline

- Application deadline: May 18
- Submission of application:
  - Students need to submit their application materials to noviap@geveducation.com and cc tianh@geveducation.com no later than May 18
- Application fee: $0
- Free visa training and pre-departure training will be offered in Mid-June each year. Students will receive their U.S. visa (Type B visa) no later than early June.
- The program is limited to the first 35 students.

3. Project Plan

The criteria are as follows:

- Accommodations will be arranged by the university:

a. Students will be housed in the university dormitories or hotels (3-star or above) near the school

- Transportation will be provided by a school bus (airport pick-up, weekend and weekday program activities)
- Students have access to the UMKC library.
- Students will have access to UMKC WIFI, School of Science and Engineering computers, and VR equipment.
- Program fee includes activities, attraction tickets, competition tickets, etc. while in Kansas City.
- During the course of the program, students will be supervised by their accompanying teachers in terms of attending classes and activities on time, Students must comply with U.S. laws and campus regulations, and so on.

IV. Program Schedule

UMKC SSE Summer Program on Artificial Intelligence and Mixed Reality July 17th, 2024 - July 31st, 2024 Program Schedule	
July 17th, 2024	Students arrive in the U.S.
July 18th, 2024	Introduction to the University and Campus Tour Introduction to the program rules and objectives Virtual Reality Laboratory Tour and Communication
	Course A1: Introduction to Virtual Reality, Augmented Reality and Mixed Reality Course Exercise Virtual Reality Game Design

July 19th, 2024	Course B1: Introduction to Artificial Intelligence Course B2: Application of Artificial Intelligence in various industries. e.g. civil engineering, geo-information engineering, etc.
	Course A2: Building Virtual Reality
	Project Description: (Mixed Reality and Artificial Intelligence Research Project) virtual reality tool platform and equipment usage, virtual reality environment construction.
July 20th, 2024	Cultural Tour Morning: City Market and WWI Memorial Museum Afternoon: The Club and the Nelson-Atkins Museum
July 21st, 2024	Free day
July 22nd, 2024	Seminar: Innovation and Association Virtual Reality Technology and Reality
	Course A3: Mixed Reality Mobile Tracking, Wizarding, and Control Project: platform environment construction
	Course B3: Data Mining and Machine Learning
	Program Q & A Team work building
July 23rd, 2024	Populous Company Tour World famous stadium architecture and design company. It has a lot of international projects such as the design of the Dome, the Winter Olympics Ice Ribbon Speed Skating Pavilion. Discussion on application of virtual reality in the architectural industry.
	Course A4: The Present and Future of Virtual Reality Project: Creating Interactive Functions, Recording and Capturing Data and Information Constructing Analog or Real Characters.
July 24th, 2024	Course B4: Artificial Intelligence Modeling and Training Learning and understanding data and building models.
	Course A5: Camera Tracking and 3D Immersive Environments
	Project: Data Collection and Modeling for Projects Tools and Open Source Software
July 25th, 2024	Course A6: Real World Modeling, Behavioral Model Management Project: Conducting Behavioral Modeling
	Course B5: Machine Vision

	Project: Completion of Target Prediction Model with Artificial Intelligence Tools
July 26th, 2024	Seminar: Applying for UMKC and Application Methods
	Course A7: Interacting with Reality Project Panel: Q&A Actions, Voice and Dynamics of a Digital or Virtual Person
	Course B6: Neural Networking
	Cultural Tours American Family Visit and Interaction
July 27th, 2024	Cultural Tours Aquariums and Legends Outlets
July 28th, 2024	Free day
July 29th, 2024	Project Preparation Lab Virtual Reality Lab Preparation of online and offline project presentations
July 30th, 2024	Project Showcase and Competition Online and offline judging
	Graduation Ceremony Announcement of Results
July 31st, 2024	Departure

V. Program Costs

1. Details of Project Fees

Please refer to the table below for the details of the program fees:

Content	Price per student	Details
Tuition	$6020	Includes program fee, miscellaneous fees (customized learning materials, study-related company visits, guest lectures, etc.), Includes room and board in the Kansas City area, as well as transportation costs (e.g., shuttle, event transportation, etc.). (Brunch included). Includes event fees, event tickets, etc.
Scholarship	USD $2000	We would like to give students $2000 financial support to join this program and catch this big opportunity. This amount would cover their flight ticket, visa fee, and travel insurance.
Total Costs per student	**$4020**	We are looking forward to seeing more talents to join and come to UMKC this summer!

**If the total number of students in the program is less than 25, students will be combined with students from other institutions. Surprise prizes will be awarded to the top three winning teams.*

VI. Contact Information

If you have any questions about this program, please contact us.

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University of Missouri-Kansas City
Academic Rankings

Best Value Public University Princeton Review
15th in the nation for Public Administration Programs U.S. News
18th in the nation for Nursing programs U.S. News
37th in the nation for Medical programs U.S. News
66th in the nation for Civil Engineering programs U.S. News