1) Umkc f1 visa interview questions : be confident //be loud //be clear

1) What is the purpose of going to USA?

A) I aim going to pursue masters in electrical and computer engineering with a specialization in wireless communication networks from university of Missouri Kansas City.

2) Why this university?

A) I chose UMKC because it offers advanced learning in wireless communication, including 5G, in networks. The university has expert professors like Dr. Shubhabrata Mukherjee and Prof. Choi, who are conducting advanced research in heterogeneous wireless networks. UMKC also provides hands on learning through well-equipped labs such as ARIEL, DANS, and the Terahertz Lab, which provides great hands-on experience. these resources help me build strong knowledge and achieve my carrier goals

3) Why this course?

A) I chose MS in Electrical and Computer Engineering because it builds on my undergraduate background and allows me to specialize in areas like wireless communication and signal processing, which match my interest and career goals in the telecom sector.

4) What other admits you have apart from umkc?

A) Apart from UMKC I have admits from Florida Atlantic university, Clarkson university and temple university

5) Tell me about your course details or curriculum?

A)My course is a ELECTRICAL AND COMPUTER engineering focused on designing communication networks. It consists of 30 credits, covering core areas like networking, signal processing, electromagnetics, and circuits. I'm specializing in digital communication systems and wireless networks. It also includes a 6-credit thesis, which gives practical exposure for my future career."

6)Why only the USA?

A "I chose the USA because it is at the forefront of 5G and advanced telecommunication technologies, and moreover U.S. universities provides research-oriented and practical knowledge, along with exposure to industry advancements

7)What was your undergraduate project?

A) My under graduate project was on PLC (Programmable Controller), used to Logic automate industrial systems. I successfully deployed logic using OpenPLC software and established connections between OpenPLC and microcontroller establish connection to control machines individually

8) Why Masters?

A) I want to do masters because I believe learning should never stop, and to grow into a senior role, I need to understand advanced concepts. During my undergraduate studies, I didn't get much chance to focus on telecommunication, so my knowledge in that area is limited. With a master's, I can specialize in my area of interest and work on projects that give me practical experience. That's why I feel this is the right time for me to pursue a master's.

9) how did you book your slot,

A) I filled out the DS-160, created a user ID and password, I have answered security questions and made the payment online. After that, I visited the ustravledoc website to apply for the USA and booked an early slot.

10)Why not start your career instead of doing a Master's?

A) The skills I gained during my undergraduate degree are not sufficient for the roles I'm aiming for in the telecom sector. That's why I want to gain advanced knowledge through my Master's. After completing my degree, I will start my career in India.

11) What are your plans after your Master's?

A) After completing my Master's, I plan to return to India and work in the telecom sector. And contributing my growth to telecom sector

12) What is your tofel score ?

A) My total score is 90 and in reading 29 listening 28 speaking 15 and writing 18 overall score is 90 officer

13) Why not study in India? :

A)" Officer, the in India also have good universities' mostly it focuses on theoretical rather than practical knowledge and us universities focuses on practical and research-oriented knowledge provides.

14) Why was your second priority university?

A) I was looking forward to go with Clarkson university but unfortunately, they didn't provide me a concentration into wireless communication networks which is my actual area of interest for which I consider umkc based on their offerings

15) WHAT WAS THE ROLES AND RESPONSIBILITES OF TELECOMMUNICATION ENGINEER ?

"As telecommunication engineer my roles and responsibilities are working on network troubleshooting issues and improving signal efficiency officer

16) What are your plans if your student visa is not approved?

A) I'm confident in my profile and my genuine interest in this program. But if my visa is not approved, I'll review the reason, and reapply. My goal remains same to study in usa

17) Why should I approve your visa ?

A) I'm a genuine student with clear academic and career goals, and I have strong ties to my home country. The curriculum I've chosen is very advanced and aligned with future technologies, which will open up great opportunities for me in India. I also have solid financial support, ensuring I remain independent during my studies and after returning home.

18)What are the subjects in your masters program ?

A)The subjects in my MSECE course include a range of advanced topics essential for specialization in electrical and computer engineering. These subjects are: • computer embedded systems and microelectronics

• communication networking

• Digital Signal Processing

• Wireless Communications

• Control Systems

• Machine Learning for Engineers

• Microprocessors Microcontrollers

 • Power Systems

19)What did you do after bachelors?

A) I graduated recently in the month of July year 2025 later after this I researched on the universities and fulfilled the requirements for my master's program

20) What are your plans after your Master's?

 A) After completing my Master's, I plan to return to India and work in the telecom sector. And contributing my growth to telecom sector

21) did u fill yor sop ?

 A) yes officer I will fill my sop how program suitable for me and I highlighted my various projects like image processing dection and plc and traffic control using arudino and how I connect to this program exactly and course curriculum they offered is very useful for my future and my carrier on goals on this basis I fill my sop.

22) Who is your sponsor?

 A) My father is sponsoring my education with a savings of 20 lakhs. and I have received scholarship 8000 dollars from the university and I have secured education loan from avanse financial services with sanctioned amount of 55 lakhs . which will cover my living and tuition expenses for two years

23) what will your sponsor occupation ?

A) my fathers works under government sector as M.R.O designation and his annually income is 18 lakhs per annum

24) how did you book your slot,

A) I filled out the DS-160, created a user ID and password, I have answered security questions and made the payment online. After that, I visited the ustravledoc website to apply for booked an early slot.

25)what is your i20 amount?

A) 45,703 thousand dollars officer .and SEVIS id is 0037031723

26) passport number? A) C1313402

 27) what is the credit per hour for umkc ?

A) $538 dollar per credit hour so 30 *538 = $ 16,140 to complete 30 credit hour

28) Will you take CPT or OPT?

A) Cpt I will consider as it will be included in my course duration and will also provide practical experience needed for my skills growth (Curriculum practical training) on

Opt I will not take it as I don't consider staying more than my course period , I will come back and apply for better opportunities in India Optional practical training Opt

29) What will you do in leisure time?

 A)I will visit the local attractions and other events to know more about they culture as going to USA is a once in a lifetime time opportunity

30) What is your port of entry?
A) my port of entry was ✈ **MCI = Kansas City International Airport**

- **M**id-**C**ontinent **I**nternational (its original name was *Mid-Continent International Airport*).

- Airport Code: **MCI**

- Location: Kansas City, Missouri, USA.

31) difference between computer science and computer engineering in masters ?

- A) computer science focused on software development lifecycle solve complex problems and other hand computer engineering focuses on Hardware + software integration EX: **Smartphones** 📱 □ self driving cars

32) did u connect any professors in the University?

A) Yes, after receiving my admission from UMKC, I reached out to the International Student Officer his name is <mark>RABIGER</mark> and asked if I could connect with faculty. They arranged an online webinar where Dr. Mukherjee discussed his research in wireless networks. I was really impressed by his work, and it made me feel that UMKC is the right place for me, as it closely matches my academic interests."

33) Why you choose Kansas City why not other state or city?

 A)My focus was on university officer , I choose many other universities from different location but considered going to Kansas based on their excellent offerings

TECHANICAL QUESTIONS:

1)What are heterogeneous network?

A) Heterogeneous networks (HetNets) in 6G are designed to integrate various network technologies and access points to provide high-speed, low-latencyc communication,essentially enabling faster processing and operation compared to previous generations EX: 5G

2)What is communication networks?

A) these networks enable transfer data from one point to other point without any physical interaction with set of pre defined protocols . EX : BULTHOOTH , AIRFIBER routers

3) what is difference between microcontroller and microprocessor?

A microcontroller is a small computer on a single chip used for specific control tasks

 Ex : aurdinos , esp32

Microprocessor (MPU) : is a microprocessor is the CPU that needs external RAM, ROM, and I/O interfaces — used for general purpose computing.

 Ex : intel i5,i7 ,mac os, and mobile phones

4) What is an LLM?

A) A Large Language Model is a type of artificial intelligence trained on huge amounts of text data. It is designed to understand, generate, and respond to human language in a natural way.

Ex: Gemini ai ,chat gpt ,blackbox

5) MINIOR PROJECT IS GOLD PRICE

PREDICTION : ML LIBRAIES USED

1) FOR DATA COLLECTION : CSV DATA

SETS : FOR INFORMATION

2)SCIKIT _LEARN : PRE PROCESSING

DATA //LIKE SCALING DATA ,SPILT

DATA SETS

3) MATPLOTLIB : FOR VISULIZATION

LINE GRAPHS

THESE ARE THE LIBRARIES USED

GOLD PRICE PREDICTION

7)supervised data : in simplie terms it

only collect labelled data EX: **Email Spam Detection**

- Input: Email text

- Label: "Spam" or "Not Spam"

Un supervised : un labelled data

Includes: Only input (no output

EX: **Market Basket Analysis** (Supermarkets)

- Input: Transaction data (items bought together)

- No labels → Finds patterns (e.g., people who buy bread also buy butter 🥖🧈).

1. Encapsulation – Hiding internal
details

2. Inheritance – Reusing code from a
parent class

3. Polymorphism – Same function,
different behavior 4.Abstraction –
Hiding complexity, showing only
essential

In ml I used in my projects some
libraries

• 2. Pandas •   is data
manipulation and analysis. • • •
NumPy •is numerical operations with
arrays and matrices. • • 4. Matplotlib
/
Seaborn • is: Libraries for data
visualization.

4. Do you know any programming
languages?

Yes, I have some knowledge of
Python and have used it for
automation

7. How many types of errors in Python?

Main types:

Syntax Errors – when the code is
not written properly (e.g., missing
colon)

Runtime Errors – occur during

execution (e.g., ZeroDivisionError)

Logical Errors – code runs but gives •

incorrect output

Python is a high-level, interpreted,

and dynamically typed language

known for its simplicity and

readability.

oriented,

It

and

supportsobject

functional

programming. It's widely used in data

science, web development, and

automation.

What is encapsulation in Python?

Encapsulation means hiding internal

data and only exposing necessary

parts through methods.

What are the concepts of Machine

Learning in Python?

A) core concepts include:

Supervised/Unsupervised Learning

Model training/testing

Feature selection

Overfitting and regularization

📌 **Digital Signal Processing (DSP)**

- **Definition**: DSP is about processing, analyzing, and modifying signals (like audio, images, or sensor data) using algorithms.

- **Example**: Noise cancellation in headphones or improving image quality in a smartphone camera.

📌 **Wireless Communication**

- **Definition**: Wireless communication is about transmitting and receiving information over the air without physical connections, using radio waves, microwaves, or infrared.

- **Example**: Mobile phone calls, Wi-Fi, or Bluetooth data transfer.

👉 In short:

- **DSP = processing signals** (what happens to the data).

- **Wireless Communication = transmitting signals** (how data is sent and received).

☑ Simple Summary for Interview

- 4G → Faster mobile internet (focus on speed).

- 5G → Beyond speed → supports massive IoT, ultra-low latency, and mission-critical services.

- Key difference: 4G is people-centric (smartphones, video),

- while 5G is device + industry-centric (IoT, automation, AR/VR, autonomous cars).ex : tesla cars used advance technology in their cars to track live location

Feature	4G (LTE)	5G
Launch Year	~2009–2010	~2019 onwards
Peak Speed	Up to ~1 Gbps	Up to ~20 Gbps
Latency	~30–50 ms	~1 ms (URLLC)
Bandwidth	<100 MHz	Up to 1000 MHz (wider spectrum)
Frequency Bands	Below 6 GHz	Sub-6 GHz + mmWave (24–100 GHz)
Technology	MIMO, OFDMA	Massive MIMO, Beamforming, mmWave
Network Architecture	Centralized, hardware-based	Cloud-native, Service-Based Architecture (SBA)
Use Cases	Mobile internet, video streaming	eMBB, URLLC, mMTC → IoT, AR/VR, autonomous cars, smart cities
Device Density	~100,000 devices per km²	~1 million devices per km²
Energy Efficiency	Higher power consumption	AI-driven energy efficiency
Reliability	Good	Ultra-reliable (99.999% uptime)
Coverage	Wide (macro cells)	Combination: macro + **small cells** for dense coverage
Network Slicing	✕ Not supported	☑ Supported (virtual networks for different services)