

Experience & Technical Skills

Can you describe a past project where you worked with GIS tools like OpenStreetMap, QGIS, PostGIS, or GeoPandas? If not, which GIS tools would you choose and why?

What are your experiences developing back-end applications in Python? If you primarily use another language, how would you transfer your skills to Python?

Have you used Docker? If so, in which scenarios? How did it improve your development or deployment process?

Do you use GPT (or other LLMs) or Copilot for coding? Please be honest. If yes, how do you typically use it? What are its strengths and limitations?

Could you describe the steps to add a new function to a backend system, from requirements gathering to deployment?

Can you share an example of how you optimized a data processing pipeline? What tools or strategies did you use? How did you handle SQL database optimizations?

Are you a good Git user? What are your habits when using Git? Would you consider yourself an expert?

What factors do you consider when choosing between multiprocessing, multithreading, or asynchronous execution for a backend?

Imagine the backend system you are working on suddenly starts processing sensor data much slower than expected. What steps would you take to diagnose and resolve the issue?

If you were designing a system to process and analyze real-time roadway sensor data from thousands of vehicles, what key architectural decisions would you make? How would you ensure scalability and reliability?"

Motivation & fit

What interests you most about this position and working with the GT Smart City Infrastructure research team?

How do you see this role contributing to your academic and professional growth?

Have you worked in a multidisciplinary team? How did you ensure effective communication between technical and non-technical members?