Practical:

We have a product (gateway) that allows our customers to connect their trucks and assets to the cloud, allowing live GPS data to be fed to the customer. While performing our gateway incoming material quality check, we found ~5% failure of the 500x units sampled for GPS not connecting. Here are the defective gateway serial numbers.

GN6U-8EF-FZ9
GPZ2-4A8-M7D
GSYM-W78-JX8
G8FF-3AH-VYX
GRV2-47G-N3B
GBZT-SPM-42E
GK2U-998-B72
GRVJ-YHK-92D
G8Y3-TJ8-SA8
GG42-C6K-82K
G2G9-WKX-4AD
GVSH-4VS-KRM
GHVT-NK3-JFZ
GJR7-UNB-RAB
GEFH-Z25-ZWX

These units are tested in a factory in Korea using a single test fixture. Being the diligent data analyst that you are, you promptly requested the GPS test data from the manufacturer so that you can analyze the data and direct the team on next steps. The manufacturer sent you ALL the raw test logs that they ever built (even the gateways that were not tested by incoming quality check). Unfortunately, your EE is on a Safari and can't be reached. The team is waiting on your recommendation on next steps.

Full test log files

Actions:

Aggregate the test data and upload to Google Big Query. Then use a data visualization tool (Tableau or Google Data Studio) to present your findings and recommendations. Provide practical suggestions (ship to the vendor, screening, return from field, etc.)

Pro-Tip: Understand the GPS test values (TTFF, SNR,...etc.) and what they mean, it should take some light research, but will be useful to understand what happened.

Project:

Share your favorite project that you have completed. This can be on any topic but would be best if it was related to data analytics or systems. Submit the report and code and be ready to discuss during your interview. (Group Assignments are OK - just be very clear on what you did and what someone else did.)