Sample Questions

1. List the sources of healthcare data, and how does the structure of data differ among sources like electronic health records, medical imaging data, clinical trials data, and wearable device data, etc.
2. List and explain the Barriers to adopting EHR in India.
3. Draw flowchart for cataracts phenotyping algorithm and write about the logical relations to accurately identify cases.
4. Draw flowchart of Phenotype algorithm for identifying type of diabetes and write the sequence to build diabetes phenotyping.
5. What is the role of Data Science in improving patient outcomes?
6. Design the steps for ECG signal analysis to contribute patient healthcare and diagnosis.
7. How does Data Science contribute to Biomedical image analysis?
8. Design EHR system using various components of it.
9. Apply the data mining process to be employed to extract meaningful insights from healthcare data collected through sensors.
10. List and explain any two Biomedical Imaging Modalities that you came across during any health-related visits.
11. Why Object detection, Image segmentation, Image Registration and Feature Extraction is required in Biomedical image analysis and explain how it can be applied for data science projects.
12. Consider a company using data science to analyze two healthcare data sources containing smoking habits and diseases information of patients. Assume you are part of team that studies the smoking habits and disease data to build models that help the company identify groups of individuals at risk of getting affected by the disease. With the help of example of similar patient records across smoking habits and disease databases, analyze these records and identify association among them to improve patient outcomes.
13. Summarize Genomic Data Analysis for Personalized Medicine with examples or case study.
14. Analyze the input text "Pt took aspirin 325 mg for knee pain". Identify the core components of NLP and provide analysis to be carried out on the given text.