Parsed Tables from Document

Table 1: Cloud and Gene Expression Analysis Steps

	ECG Analysis on the cloud		**Gene Expression - Cancer Diagnosis**	
Steps	**Focus**	**Example**	**Focus**	**Example**
1. Data Acquisition	Data is collected from the patients with the help of sensors or wearable devices	AWS S3	Data is collected from the patients with the help of sensors or wearable devices	AWS S3
2. Data uploading	upload the waveform data into cloud	AWS IOT	upload the image data onto cloud	Azure Datafactory
3. Data Preprocessing	Normalization of data, removal of noise	AWS Lambda	Normalization of data, filtering out low quality iamges	AWS Lambda
4. Feature Extraction	Diagnose Arrhythmias from waveform	Google Cloud ML	Gene expressions are extracted to find its deviation with normal gene expression	Google Cloud AI Platform, AWS ML Studio
5. Classification	To classify if the waveform has arrhythmias or not	Sagemaker, Tensorflow on Cloud	To classify if patient has cancer or not	Sagemaker, Tensorflow on Cloud
6. Visualization	The predicted results can be visualized using cloud	Power BI (Business Intelligence)	The predicted results can be visualized using cloud	•PowerBI •Gene Expression Tools •Heatmap •Dendrogram
7. Storage	The results are stored for future purpose	AWS RDS (Relational Database Service)	The results are stored for future purpose	AWS RDS (Relational Database Service)
8. Alerts & Notification		AWS SNS (Simple Notification Service)		
9. Collaboration			Discussion on different formulas for future research	Azure Devops

Table 2: Geoscience Application Steps

Steps	**Focus**	**Example**
1. Data Collection	Sensor Data, Satellite Data, Climate Data, Seismic Data	GCP Public Datasets
2. Data Storage	Spatial + Time Series	AWS S3
3. Data Preprocessing	Raw Data →Usable Format	AWS Lambda, GCP Data Proc
4. Data Integration	Merge data from multiple sources	GCP Big Query
5. Simulation or Modeling	Climate models, seismic models	GCP Compute Engine
6. Visualization	Analyze patterns	Power BI, Tableau, GCP, AI Platform
7. Results Storage	Future Use	AWS S3
8. Collaboration & sharing	Share data/models with researchers	Azure sharepoint, GCP firebase