

Smart Network Planning

Revolutionizing 5G Network Deployment with AI and Data-Driven Insights

AI Connectivity Hackathon



Meet the Team

Frontend Team



Haris Mughal (Frontend Developer)



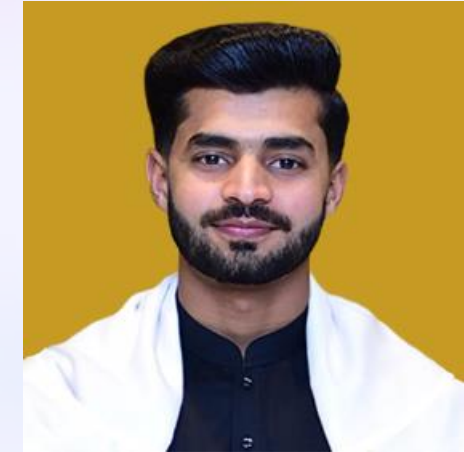
Jean Pierre (Frontend Developer)

Backend Team



Rajesh (Backend Developer)

Presentation Team



Ubaid Ullah (Designer & Content Creator)



M. Adnan (Presenter)



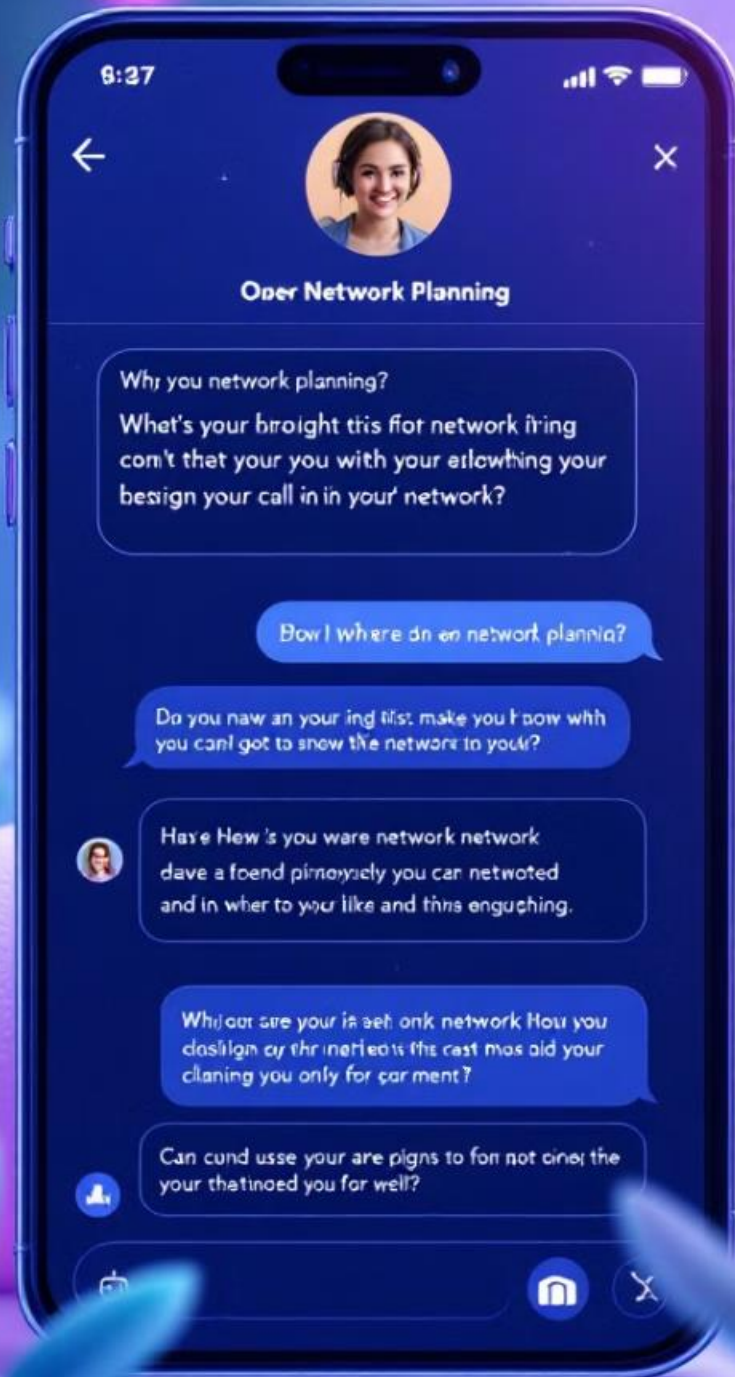
Problem Statement

○ Connectivity Gap

Millions lack reliable internet access, limiting opportunities.

○ Investment Challenges

Prioritizing investments for maximum impact is difficult.



Proposed Solution

AI-Powered Chatbot

Assists in planning 5G network deployment.

Data-Driven Insights

Analyzes data to optimize resource allocation.

Objectives



Precise Planning

Develop effective network deployment strategies.



Automated Planning

Reduce manual effort in network planning.



Optimized Resources

Improve latency and throughput.

Workflow and Architecture

- 1 Frontend**
Streamlit UI with file upload for CSV, Excel, and JSON.
- 2 AI Model**
sentence-transformers/all-MiniLM-L6-v2 for semantic embeddings.
- 3 Vector Database**
Milvus for efficient storage and retrieval of embeddings.
- 4 Chatbot Integration**
Groq's Llama-3.1 for conversational capabilities.



Key Features

1

Strategic Insights

Answers questions about network inefficiencies and optimization.

2

Data-Driven Recommendations

Provides insights for infrastructure planning.

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Market Size and Impact

\$1.4T

Market Size

Global 5G deployment market size
by 2027.

\$100B

Revenue Impact

Potential revenue increase for
telecom companies.