



PROBLEM

1.3B

Children without internet access

1/2

Schools without internet access

2030

Year expected to have all schools connected

100k+

Schools to Connect

limited

Resources

many

Factors to consider





OUR SOLUTION

Predicting which schools to connect first

Our data-driven Al model is using different data sets to rank top 5 schools to be connected in the area, with details and alternatives on the suggested technology and costs.

Data sets

Multiple factors are used for calculating the rank, such as: location, available network infrastructure, population density, terrain, weather conditions impact and cost of implementation and future operational costs.





WHY?

Current approaches to school connectivity face scalability and information challenges. Our solution directly supports Giga's approach of using data, maps, and innovative financing models to accelerate school connectivity.

An Al-driven solution is necessary because of the sheer scale and complexity of the problem – with millions of schools and numerous data points, manual analysis is not enough. Al can spot patterns and make data-driven recommendations that humans might miss.

The solution is needed to transform Giga's rich datasets into smart connectivity planning: it tells us where the need is greatest, what the likely obstacles or costs are, and how to prioritize locations.

TECHNOLOGIES USED

Al helps take into considerations different available datasets and make the optimal decision. School connectivity data from Giga's Giga School Daily Check App, installed in schools across 21+ countries. **Connectivity Data** Offers global cell tower location data categorized by radio type, such as 4G and **OpenCellID** 5G. The Elevation API provides elevation data Google maps for all locations on the surface of the earth, including depth locations on the elevation API ocean floor (which return negative This spatial raster dataset depicts the values). GHS distribution and density of population, expressed as the number of people per population grid

cell.



IMPACT



Efficiency - Connecting schools faster

- Faster decision making in which schools to connect first.
- Reducing research time on available technologies and outside factors that impact connectivity.

Cost-reduction



- Proposing the least costly solution for connection in the long run.
- Calculation taking into consideration available infrastructure, surrounding terrain and population density, as well as costs.
- Maximizing ROI in terms of students connected per dollar.

Social impact



- Contributing to improved learning outcomes by faster connection.
- Students will have access to up-to-date learning materials, online courses, and the ability to connect with the wider world.

FUTURE IMPROVEMENTS



CONNECTIVITY ISSUE ALARMS

Predict any potential connectivity issues by analyzing weather conditions, traffic congestion, power outages and ISP backhaul problems.



SIGNAL IMPROVEMENT PROPOSITIONS

Propose a change for connectivity by detecting a better technical solution than the one previously available.



DONOR HUB

Possibility for outside orgasizations or people to donate money for building new infrastructure or enabling monthly internet subscriptions.



OUR TEAM





Thank You For Watching!

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