Example proposals link - <https://docs.google.com/presentation/d/1Qx_Ygz1z97NXQ4hAo-TBfB0RW7IVY58sjSSdfEgh34w/edit#slide=id.g770c4d828e_0_471>

Features to add to the proposal presentation

* SGD Goal photo on the first slide and Team name/details (Slide 15 of example proposals) - 1 slide**✔**

Introduction:

* Picture showing past stats of the goal (Slide 20 of example proposals) - 1/2 slides**✔**
* Data description (Slide 22-23 of example proposals) - 1 slide**✔**
* Motivation (Slide 39 of example proposals) (give some famous quote) - 1 slide**✔**

Method:

* Timeline (Slide 54 of example proposals) - 1 slide**✔**
* Workflow pipeline (Slide 24 of example proposals) - 1 slide**✔**
  + Tensorflow for CV**✔**
  + Spark for structured data**✔**
* Work distribution (Slide 31 of example proposals) - 1 slide**✔**
* (Optional) Summary (Slide 32 of example proposals) - 1 slide

Result:

* Line chart of several indicators vs year - 1 slide
* Correlation matrix and heat map (Slide 12 of example proposals) - 1 slide
* Expected output (Slide 30 of example proposals) - 1/2 slides

Takeaways:

* Conclusion/Takeaways (Slide 14 and 33 of example proposals) / Impact- 1 slide

Background:

* (Optional) References (Slide 34 of example proposals) - 1 slide

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Goals:

* Impact on the country’s development based on urban development.
* **SUPPORT LEAST DEVELOPED COUNTRIES IN SUSTAINABLE AND RESILIENT BUILDING** Support least developed countries, including through financial and technical assistance, in building sustainable and resilient buildings utilizing local materials.
* Shop, eat and drink locally. Supporting neighbourhood businesses keeps people employed and circulates money back into your community.
* **IMPLEMENT POLICIES FOR INCLUSION, RESOURCE EFFICIENCY AND DISASTER RISK REDUCTION**: By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.

Structured Data:

* Here urban development is observed based on the factors such as urban populations, Tourism, merchandise imports and exports, Education rate, Technology, Emmisions etc
* The country’s development is measured using factors like GDP, GNI, Employment rate, Poverty intensity.

Unstructured Data:

* Extract various features of the data such as roads, no. of buildings in the area and understand its impact on the development of the city.

Recommendations:

* Analyzing the correlation of all the urban development factors from structured and unstructured data with the country’s development measures to understand which factors are negatively affecting the country’s development and which of the factors are positively affecting it.
* Predict the country’s progress for the next five years based on the analysis of past 20 years.
* Recommend the changes required to the negatively affecting factors in order to reflect a positive impact on the country.

Lines to add in PPT:

tracking building footprints to monitor construction and demolition in satellite imagery time series

identifying new building construction in satellite imagery is an important factor in establishing population estimates in many areas

the appearance of satellite images can change dramatically from month to month due to differences in weather, illumination, and seasonal effects on the ground,

<https://mlhub.earth/docs>

1. Changes in building construction over time, correlation with countries growth

2. Forecasting prediction overtime

Concepts:

Using Intersection over Union(IoU) evaluation metric which is identical to the Jaccard similarity concept learnt in class for object detection in the satellite images.

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Hypothesis:

1. Considering the growth rate of the developing countries, the dependency of the developing countries over the selected countries should be reduced and become negligible over the periods.

<https://data.worldbank.org/indicator/SP.URB.GROW>

<https://data.worldbank.org/indicator/AG.LND.FRST.ZS?end=2020&start=2000&view=chart>