MY THESIS TITLE IN CAPITAL LETTERS

BY

MY NAME

(Admission No. 21ABCD1234)

THESIS

SUBMITTED TO

DEPARTMENT OF APPLIED GEOPHYSICS

INDIAN INSTITUTE OF TECHNOLOGY

(INDIAN SCHOOL OF MINES), DHANBAD

For the award of the degree of

MASTER OF SCIENCE & TECHNOLOGY

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ACKNOWLEDGEMENT

I extend my sincere gratitude to Prof.AA, a distinguished Professor in the Department of BB at IIT(ISM) Dhanbad.

MIND THAT YOU NEED SOME CERTIFICATES BEFORE THE ACKNOLEGMENT. REFER PG MANUAL ON THE IIT ISM SITE FOR CERTIFICATES. THIS TEMPLATE IS AS PER THE REQUIREMENT OF THE YEAR 2023-2024 BATCH. PLEASE MAKE CHANGES FOR YOURSELF IF THINGS CHANGE LATER.

CONTENTS

List of Tables

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Abstract

Could you write your ABSTRACT here?

CHAPTER 1

Introduction

This is an introduction chapter. You should put citations like this (Zhang, 2011).

If you need points in it-

1. Random Forest (RF)
2. Gradient Boosting
3. Convolutional neural network (CNN)
4. Long Short-term Memory (LSTM)

CHAPTER 2

Data

The speed of light is approximately 299,792,458 meters per second, making it the fastest-known phenomenon in the universe. The speed of seismic waves is very low compared to light and that's why **earthquake comes** and **lightning strikes**.

Getting figure here-

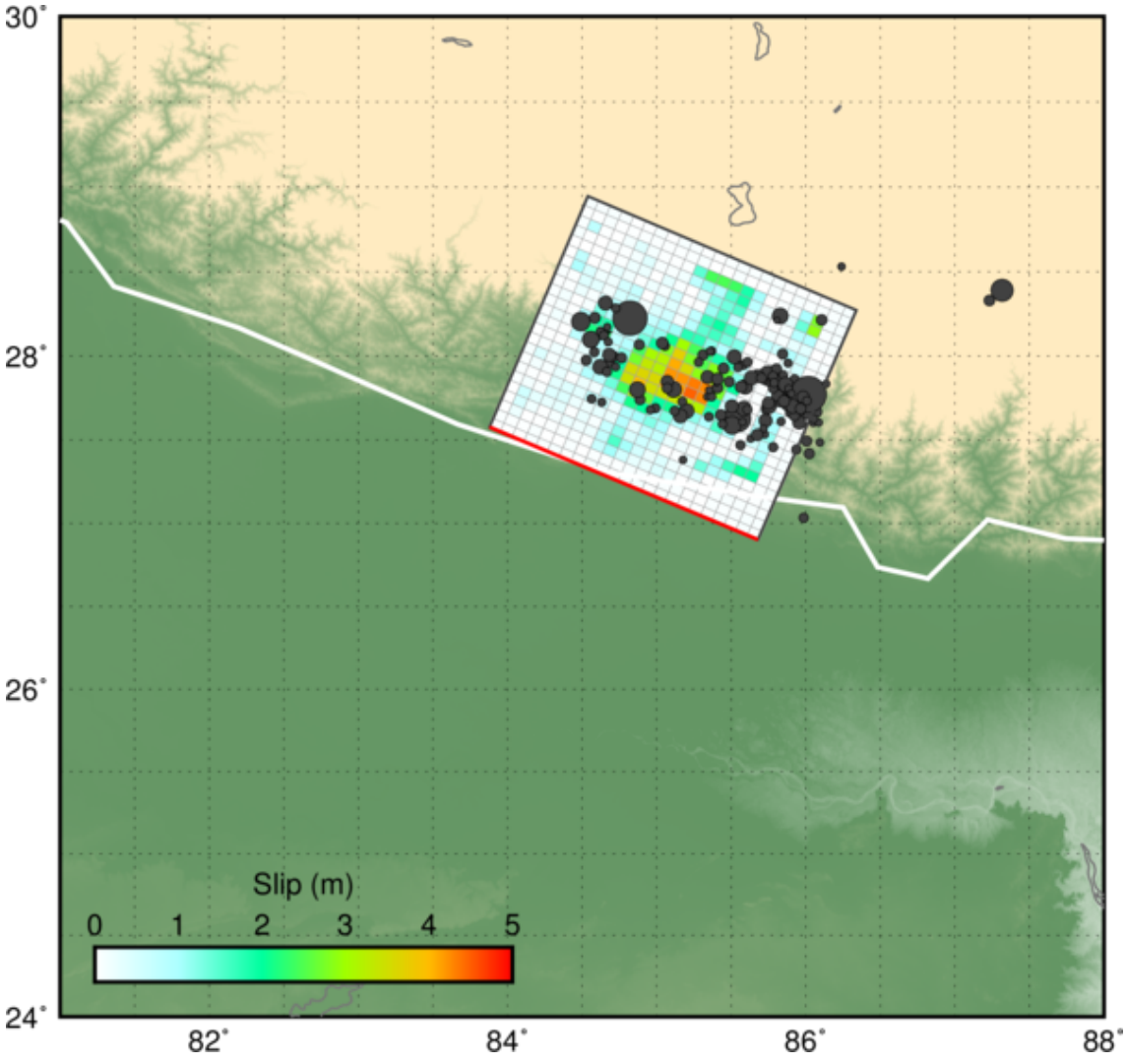


Figure 1: Do caption your maps properly

CHAPTER 3

Method

Total internal reflection is a phenomenon in optics where light, when traveling from a denser medium to a less dense medium at an angle greater than the critical angle, reflects back into the denser medium rather than refracting out.

My subsection

This principle is the basis for optical fibers used in telecommunications.

CHAPTER 4

Your Chapter Title Goes Here

Distributed Acoustic Sensing (DAS) is a transformative technology in geosciences and engineering. DAS records ground motion along fiber-optic cables that are comparable to those obtained by single-component accelerometers or geophones. The transformative potential arises from the fiber itself being the sensor and allowing for a spatially continuous measurement. The fiber can be tens of kilometers in length and it can be located in shallowly buried trenches, in boreholes, or in some combination. The fiber geometry can encompass a large volume that can be tens of cubic kilometers in size. DAS inherently possesses properties of a large-N seismic array. The rapidly increasing interest in DAS arises from its potential to be used in continuous arrays that are kilometers in length while providing spatial resolution of meters and frequency response from millihertz to kilohertz.

DAS applications in geosciences and engineering are numerous and growing including opportunities for deploying early warning systems for earthquakes, volcanic eruptions, continental and marine landslides, and avalanches, and for monitoring reservoirs and civil infrastructure. DAS can complement and supplement conventional seismic sensors and arrays already used across a wide range of disciplines.

Statistical Analysis

YOUR EQUATIONS GOES GOOD

The error between predicted and actual pore pressure has been calculated as R^2 coefficient. The Coefficient of Determination R^2, indicates the goodness of fit of the regression line to the actual data points.

R^2 ranges from 0 to 1, where:

1. Sum of Squares Total (SST):

$$SST = \sum_{i=1}^{n} (y_i - \bar{y})^2$$

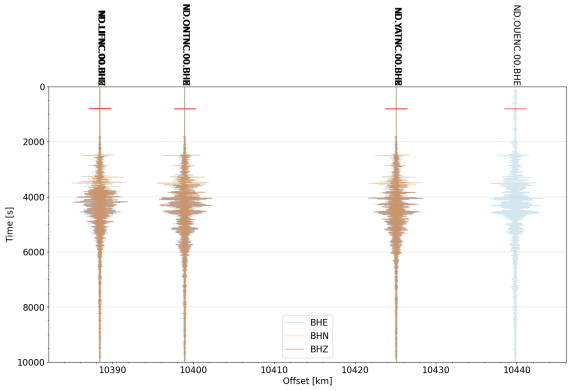
2. Sum of Squares Regression (SSR):

$$SSR = \sum_{i=1}^{n} (\hat{y}_i - \bar{y})^2$$

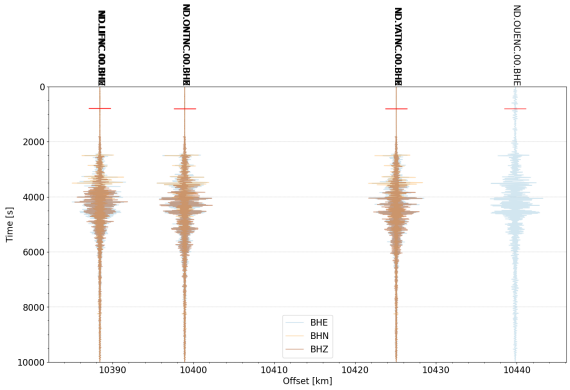
CHAPTER 5

Summary and Conclusions

I need to show my results as subplots here.



(a) The first image



(b) Second image

Figure 2: The figure with subplots

Conclusions

As we wrap up this discussion, I hope this template helps you save your time doing formatting. Cheers!

References

Zhang, J. (2011). Pore pressure prediction from well logs: Methods, modifications, and new approaches. *Earth-science Reviews - EARTH-SCI REV*, 108:50–63.