

# Utilizing Deep Convolution Neural Network for extracting Urban Environment Component by using Satellite Image Segmentation

Maifee Ul Asad  
ID: 17701086  
Session: 2016-2017

Department of Computer Science and Engineering  
University of Chittagong  
Chittagong – 4331, Bangladesh  
November, 2021

## Declaration

I, Maiffee Ul Asad, hereby declare that this report titled “” and the work presented in it is my own. I confirm that:

- This work was done wholly by me under the guidance of my thesis supervisor, N. M. Istiak Chowdhury.
- Where I have consulted the published work of others, this is always clearly attributed.
- Where I have quoted from the work of others, the source is always given. Except for such quotations, this is entirely my own work.
- I have acknowledged all primary sources of help.

---

Maiffee Ul Asad

ID: 17701086

Department of Computer Science & Engineering

University of Chittagong

Chittagong-4331

## Approval for Submission

This report titled “” by Maiffee Ul Asad, ID: 17701086, Session: 2016-2017 has been approved for submission to the Department of Computer Science and Engineering, University of Chittagong, in partial fulfillment of the requirements for the degree of Bachelor of Science(Engineering).

---

N. M. Istiak Chowdhury

Lecturer

Department of Computer Science & Engineering

University of Chittagong

Chittagong-4331

## **Acknowledgements**

All praise is due to Allah for blessing me with the opportunity to perform this study.

I offer my most fullest respect to my supervisor.

I'm also thankful to my family members and friends.

# Abstract

secret sauce

# Contents

|  |          |
|--|----------|
| Declaration                            | ii       |
| Approval for Submission                | iii      |
| Acknowledgements                       | iv       |
| Abstract                               | v        |
| List of Figures                        | vii      |
| <b>1 Introduction</b>                  | <b>1</b> |
| 1.1 Alu . . . . .                      | 1        |
| 1.2 Dim . . . . .                      | 1        |
| 1.3 Problem Statement . . . . .        | 1        |
| 1.4 Motivation . . . . .               | 1        |
| 1.5 Random . . . . .                   | 1        |
| <b>2 Literature Review</b>             | <b>2</b> |
| <b>3 Methodology</b>                   | <b>3</b> |
| <b>4 Material &amp; Pre-Processing</b> | <b>4</b> |
| <b>5 Train and Comparison</b>          | <b>5</b> |
| <b>6 Result</b>                        | <b>6</b> |
| <b>7 Conclusion</b>                    | <b>7</b> |

|          |                            |           |
|----------|----------------------------|-----------|
| <b>8</b> | <b>Future Works</b>        | <b>8</b>  |
| <b>A</b> | <b>Related Codes</b>       | <b>9</b>  |
| A.1      | Code Snippet 1 . . . . .   | 9         |
| <b>B</b> | <b>Model Plots</b>         | <b>10</b> |
| B.1      | Result Compare 1 . . . . . | 10        |
| B.2      | Result Compare 2 . . . . . | 11        |
|          | <b>Bibliography</b>        | <b>12</b> |

# List of Figures

|     |                                  |    |
|-----|----------------------------------|----|
| B.1 | Comp 1 . . . . .                 | 10 |
| B.2 | Literally comp1 figure . . . . . | 11 |



# Chapter 1

## Introduction

Blah blah blah.

### 1.1 Alu

Alu is potato.

### 1.2 Dim

Dim is love.

### 1.3 Problem Statement

Jibon mane Z-bangla.

### 1.4 Motivation

Jiner Badshah Solaiman

### 1.5 Random

blah blah Demir et al.

# Chapter 2

## Literature Review

Onek Blah Blah Blah. Kintu khubi important, nijer jnno.

# Chapter 3

## Methodology

# Chapter 4

## Material & Pre-Processing



TensorFlow

## Chapter 5

### Train and Comparison

# Chapter 6

## Result

## Chapter 7

## Conclusion

## Chapter 8

### Future Works



# Appendix A

## Related Codes

### A.1 Code Snippet 1

```
# x = y  
x = y
```

# Appendix B

## Model Plots

### B.1 Result Compare 1

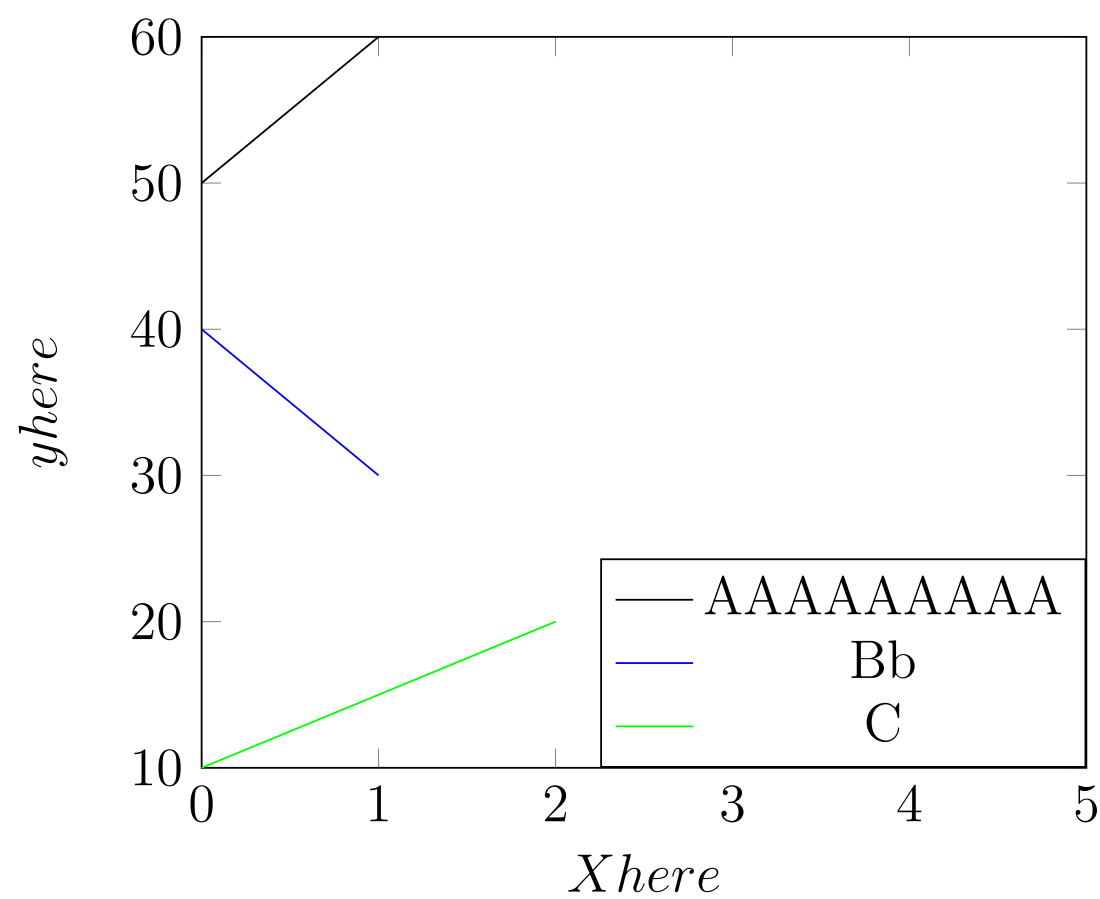


Figure B.1: Comp 1

B.2 Result Compare 2

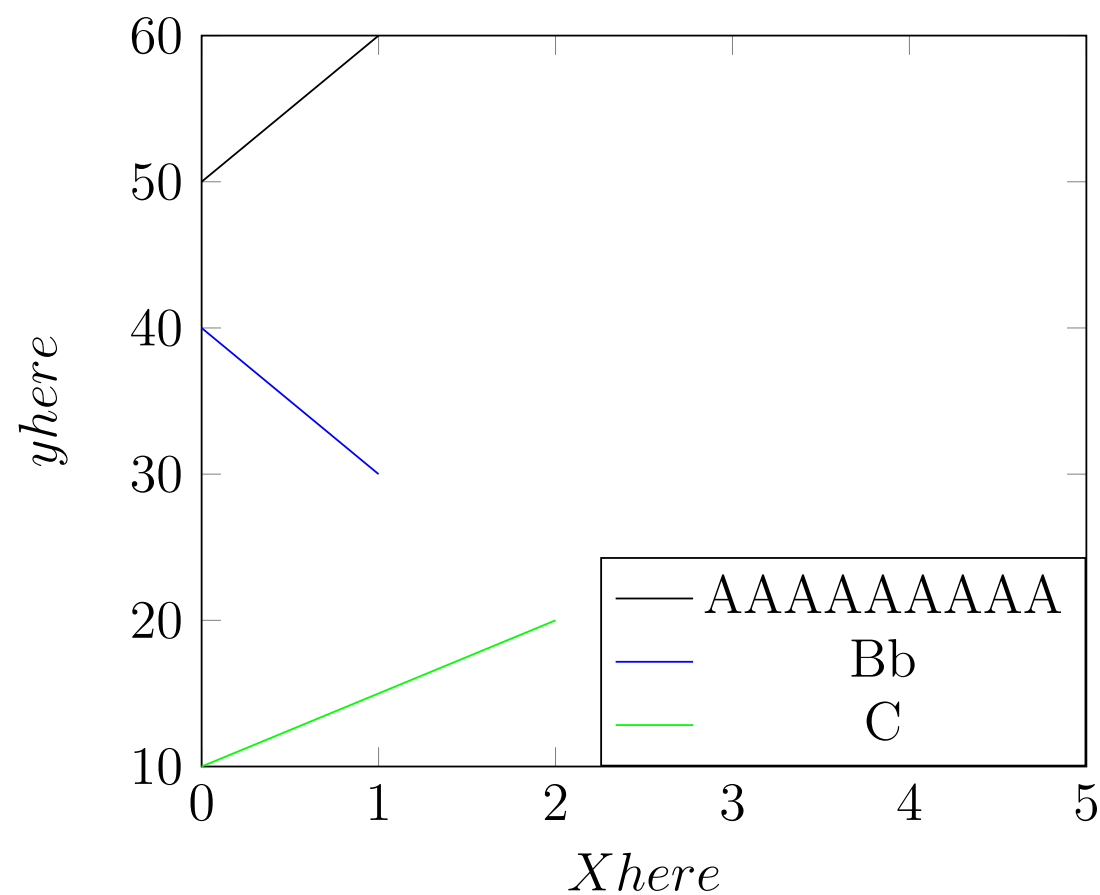


Figure B.2: Literally comp1 figure

# Bibliography

Demir, Ilke, et al. “DeepGlobe 2018: A Challenge to Parse the Earth Through Satellite Images”. In *The IEEE Conference on Computer Vision and Pattern Recognition (CVPR) Workshops*. 2018.