



Internet Download Speed Analysis

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OBJECTIVES

- Introduction
- Methodology
- Results
- Discussion of Results
 - Calculated Variables
 - Graphs
- Map

INTRODUCTION

- In this project we are supposed to:
 - Implement a probability analysis on our Random Variable (internet speed)
 - Generate a proper model to represent our Random Variable
 - Map our results according to the places where the data was collected

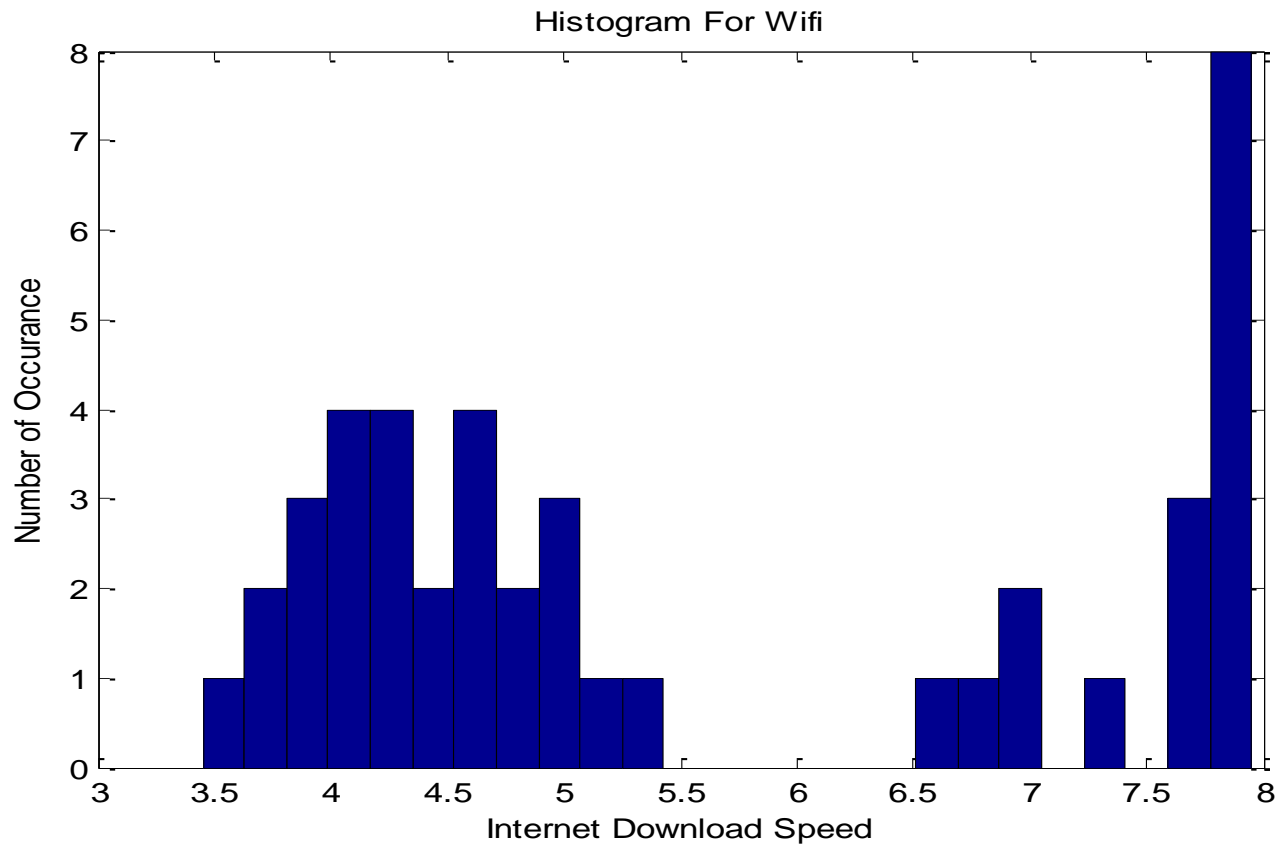
METHODOLOGY

- Our group consists of 3 colleagues
- Each partner is supposed to collect the internet speed of 3G and Wifi on several days and different times
- The application we used is “**SPEEDTEST**” and their website.
- We got about 50 samples with each type of network
- We used various devices to take samples such as laptops and smartphones.
- We analyze the data using MATLAB functions and then produce required graphs

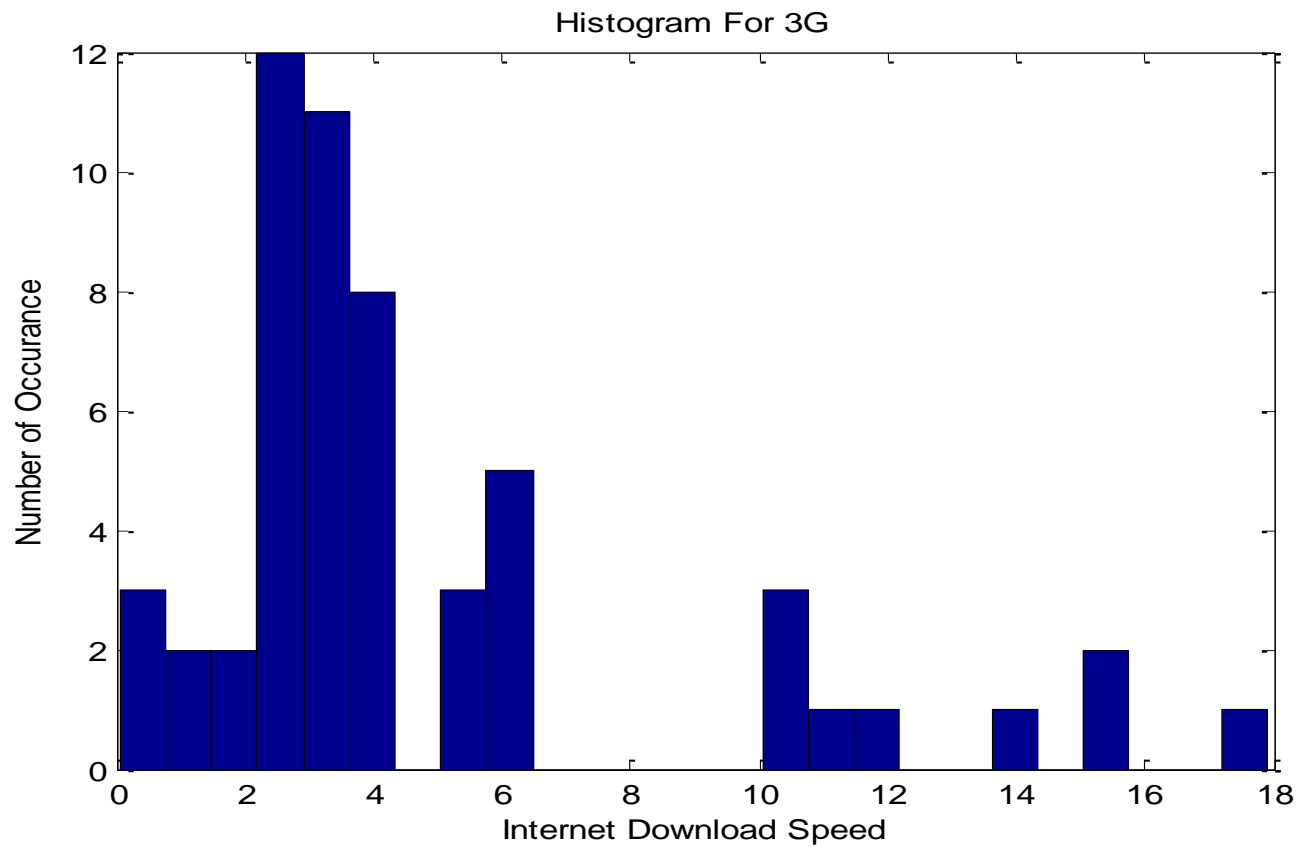
RELATED CALCULATIONS

- Wifi average = 5.5633 Mbps
- 3G average = 4.8933 Mbps
- Wifi Variance = 2.5897 Mbps
- 3G Variance = 16.2364 Mbps
- Correlation Coefficient of Wifi = 1
- Correlation Coefficient of 3G = 1
- Correlation Coefficient of Wifi inside the campus and outside the campus:
 - 1.0000 -0.1805
 - -0.1805 1.0000
- Correlation Coefficient of Wifi inside the campus and outside the campus:
 - 1.0000 -0.1805
 - -0.1805 1.0000

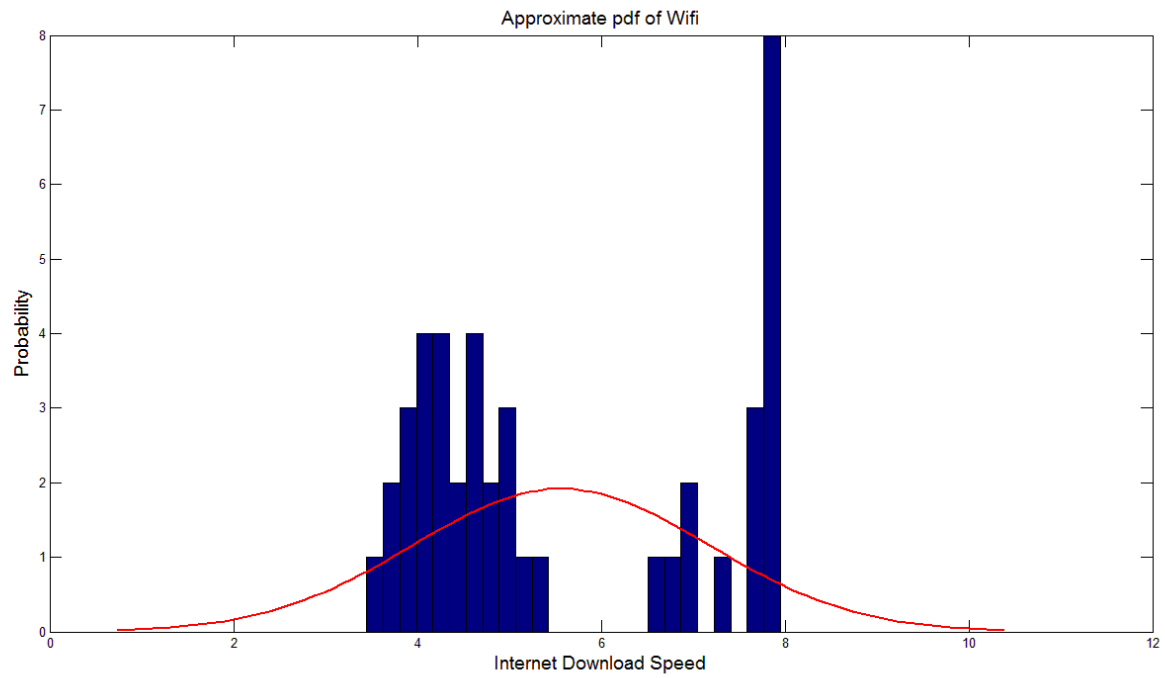
WIFI HISTOGRAM



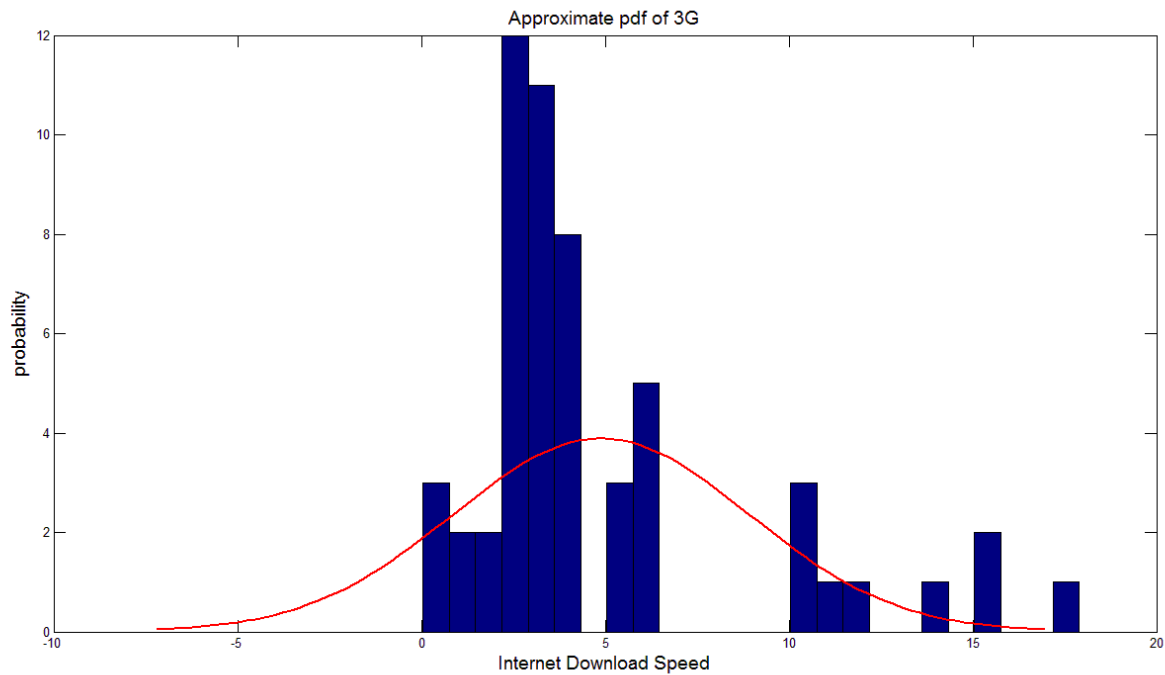
3G HISTOGRAM



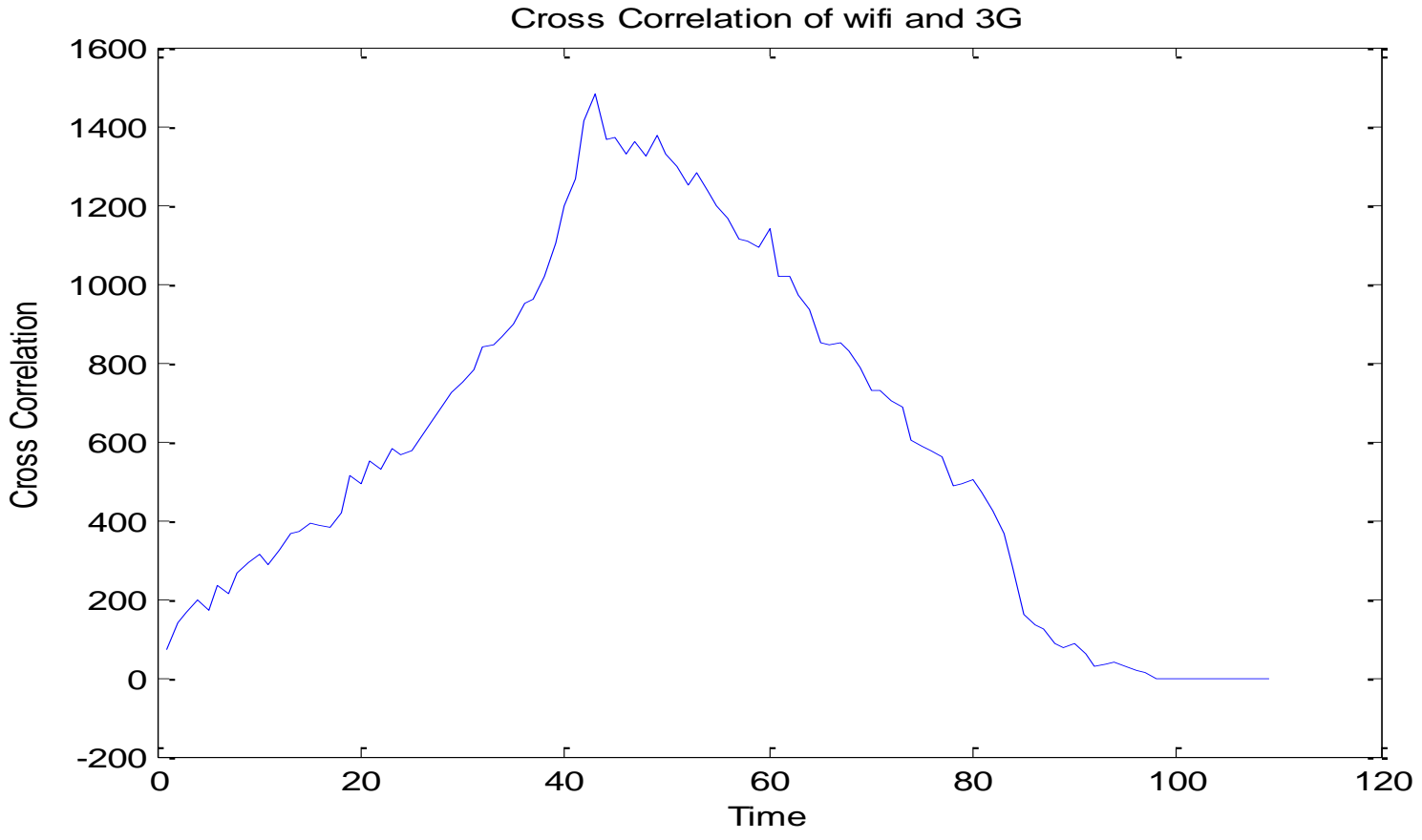
WIFI PDF



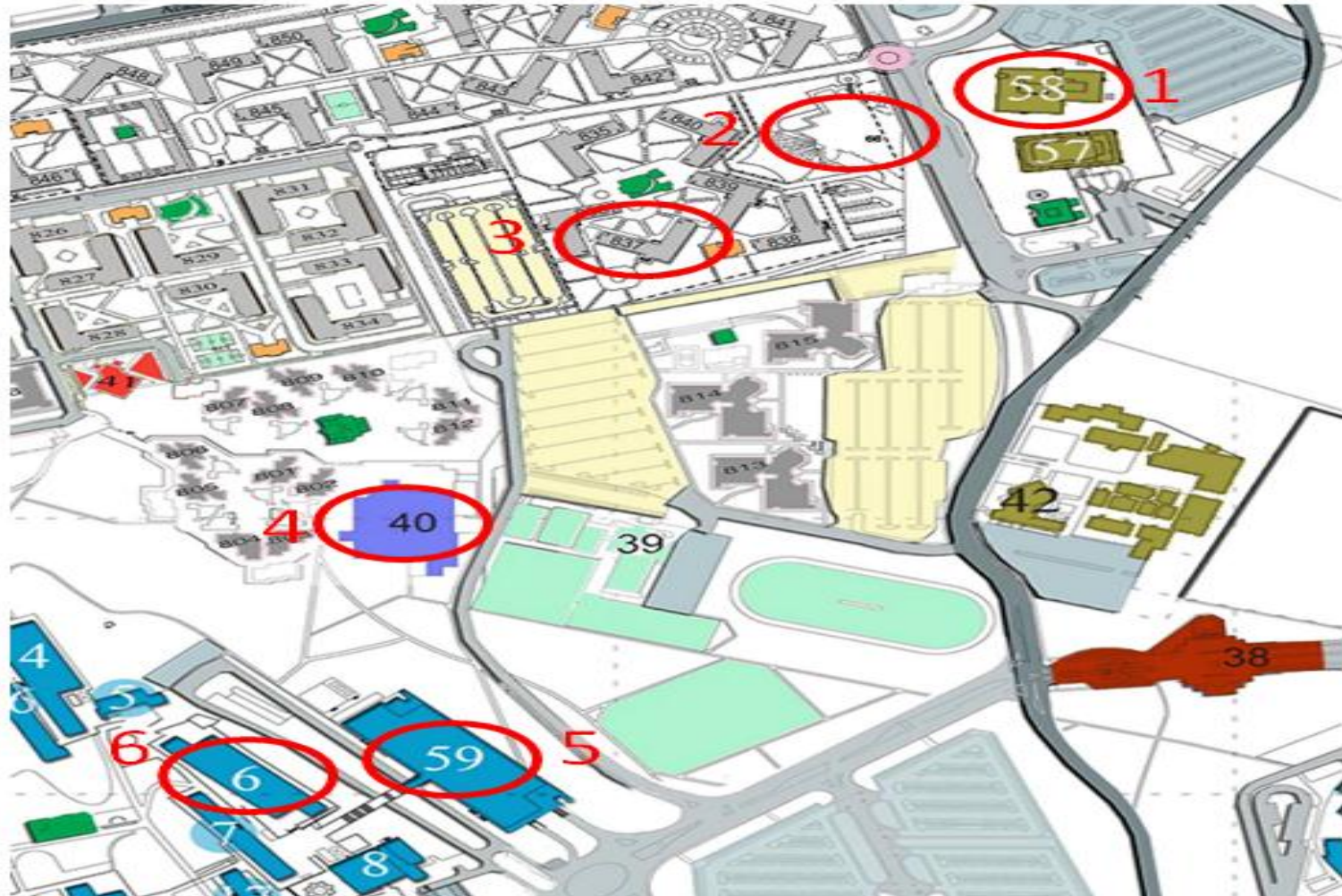
3G PDF



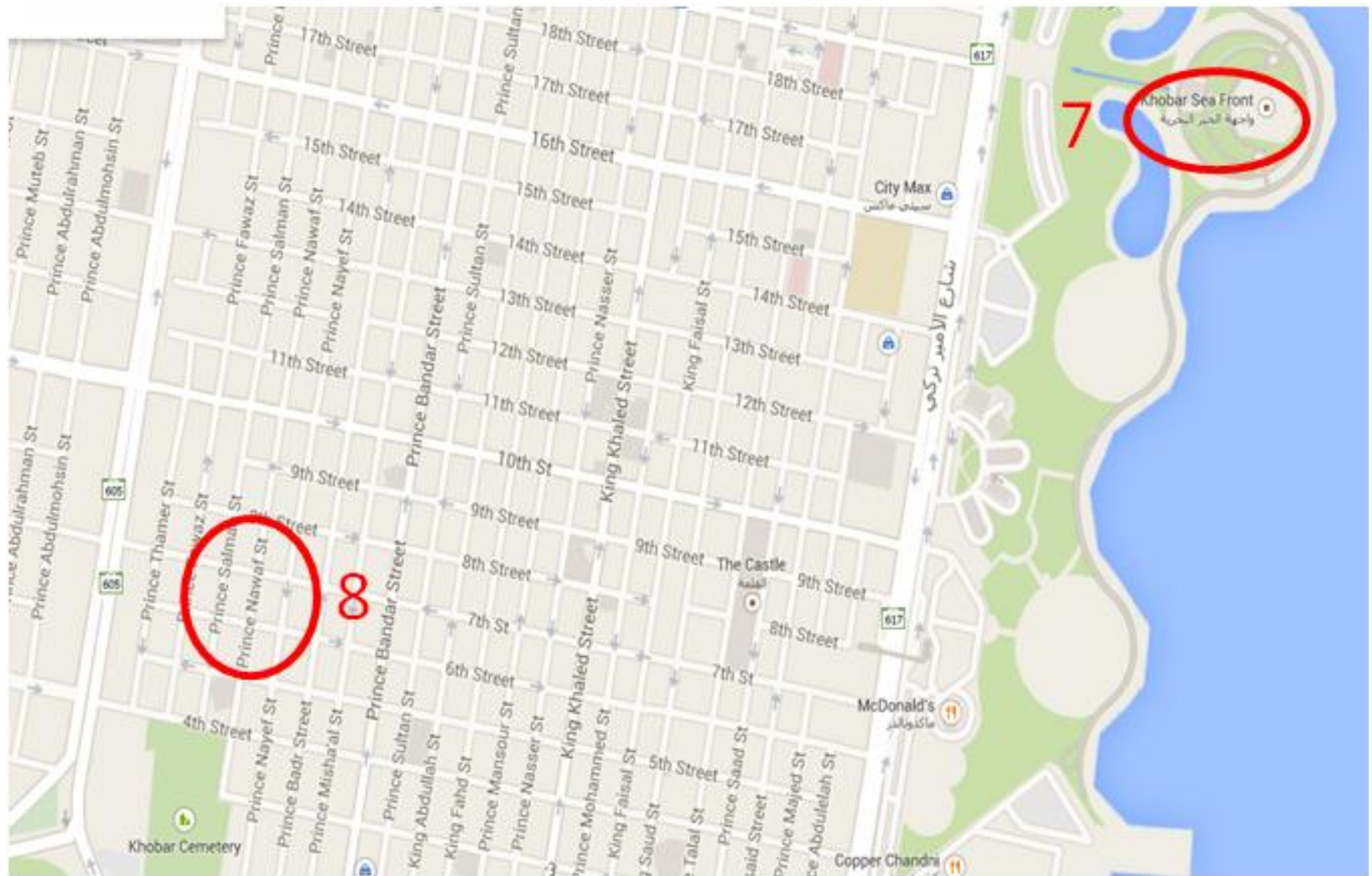
CROSS-CORRELATION WIFI&3G



MAP 1



MAP 2



AVERAGE SPEEDS

	Building	Type of Network	Average Download Speed
1	58	WIFI	7.854 MBPS
2	KFUPM MALL	WIFI	4.32 MBPS
3	837	3G	14.004 MBPS
4	KFUPM RESTAURANT	WIFI	2.91 MBPS
5	59	3G	1.133 MBPS
6	6	WIFI	4.065 MBPS
7	KHOBAR SEA FRONT	3G	2.924 MBPS
8	PRINCE NAWAF STREET	3G	5.609 MBPS
8	PRINCE NAWAF STREET	WIFI	4.341 MBPS

Conclusion

- In this project we collected several internet download speed samples for both wifi networks and 3G networks. After that we implemented the theories and knowledge which we covered in the course to our random variable (internet download speed). We calculated several parameters such as averages, variances and correlations. Finally, we found the pdfs which describe our random variable.