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**The Effects of Visual and Design Features on the Perception of
Correlation in Scatterplots**

A thesis submitted to the University of Manchester for the degree of
Doctor of Philosophy
in the Faculty of Science and Engineering

2024

Gabriel Strain
Department of Computer Science

Contents

Contents	2
List of figures	3
List of tables	4
List of publications	5
Abstract	6
Lay abstract	7
Declaration of originality	8
Copyright statement	9
Acknowledgements	10
1 Introduction	11
2 Literature Review	13
3 General Methodology	14
4 Adjusting the Opacities of Scatterplot Points Can Affect Correlation Estimates	15
5 Adjusting the Sizes of Scatterplot Points Can Correct for a Historic Correlation Underestimation Bias	16
6 Interactions of Opacity and Size Adjustments	17
7 Scatterplots Optimised for Correlation Perception Affect Beliefs About Correlations and Attitudes Towards Trivial Topics	18
8 Conclusion	19
Appendices	20
A First appendix	21

Word count: 1000

List of figures

1.1	test plot	12
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List of tables

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Abstract

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Chapter 1

Introduction

Scatterplot

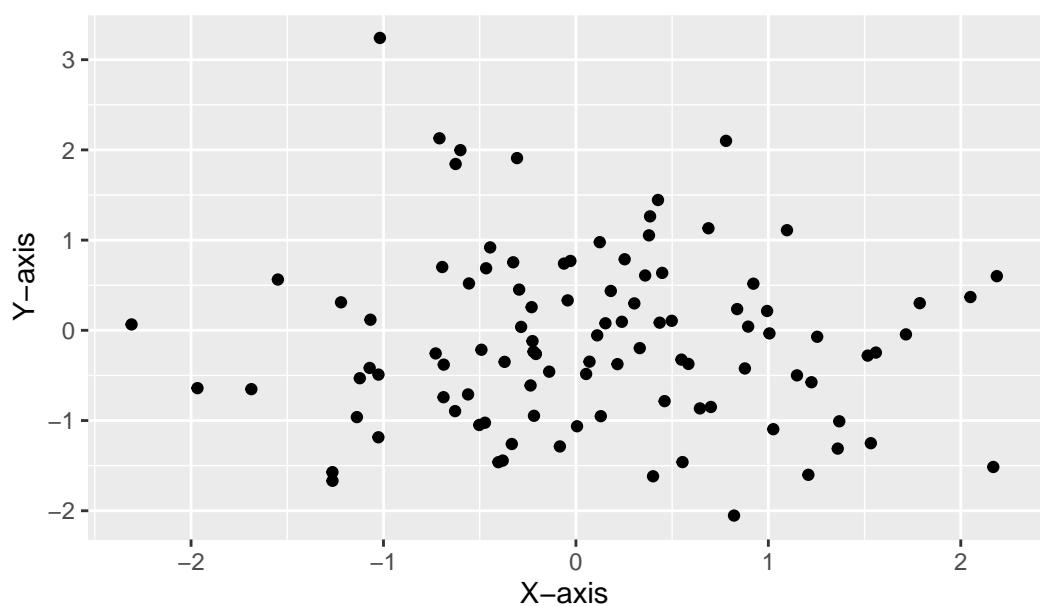


Figure 1.1. test plot

Chapter 2

Literature Review

Chapter 3

General Methodology

Chapter 4

**Adjusting the Opacities of Scatterplot
Points Can Affect Correlation Estimates**

Chapter 5

**Adjusting the Sizes of Scatterplot Points
Can Correct for a Historic Correlation
Underestimation Bias**

Chapter 6

Interactions of Opacity and Size Adjustments

Chapter 7

**Scatterplots Optimised for Correlation
Perception Affect Beliefs About
Correlations and Attitudes Towards
Trivial Topics**

Chapter 8

Conclusion

Appendices

Appendix A

First appendix

A.1 Section in Appendix

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