# Project template

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this is an abstract. Can you write an approx. ten sentence summary of your project? In one sentence what do you do (e.g. cryptography, analysis, numerical analysis, statistical modelling, optimisation etc.)? Why is this topic important? What is the key background? What re your Aims? What do you actually do? Final thought ...

# Table of contents

# Preface

## Statement on the use of AI in your project.

Please describe any use of AI (e.g. CodePilot, ChatGPT) in the project here:

# 1 Introduction

Provide a big picture introduction to your project.

What are the key ideas that you need to introduce to the reader? Is there some historical context that you can provide (e.g. what was known about the problem before the technique/approach that you have considered was developed).

Given that you have introduced the reader to some key background ideas, what are the aims of the work?

Please note that we offer a broad range of project and the aims will reflect this. For example, you might aim to:

- work through a proof of a theorem
- develop a mathematical model of some system (that you will have introduced above)
- develop an implementation of a method to solve a certain class of problem
- apply a technique in the analysis of a dataset
- etc.

By the end of the introduction, you should have placed your project in context and outlined what you are going to do.

Here is a reference (Knuth (1984)).

# 2 Some work I did

You might consider having a results chapter for each Aim that has been defined in Chapter 1 (*note that I am cross referencing the previous chapter here*).

I am studying the equation

$$y = kx^2, \tag{2.1}$$

where $k \in \mathfrak{R}$.

Se Figure 2.1 for plot (*note I am cross-referencing the figure here*).
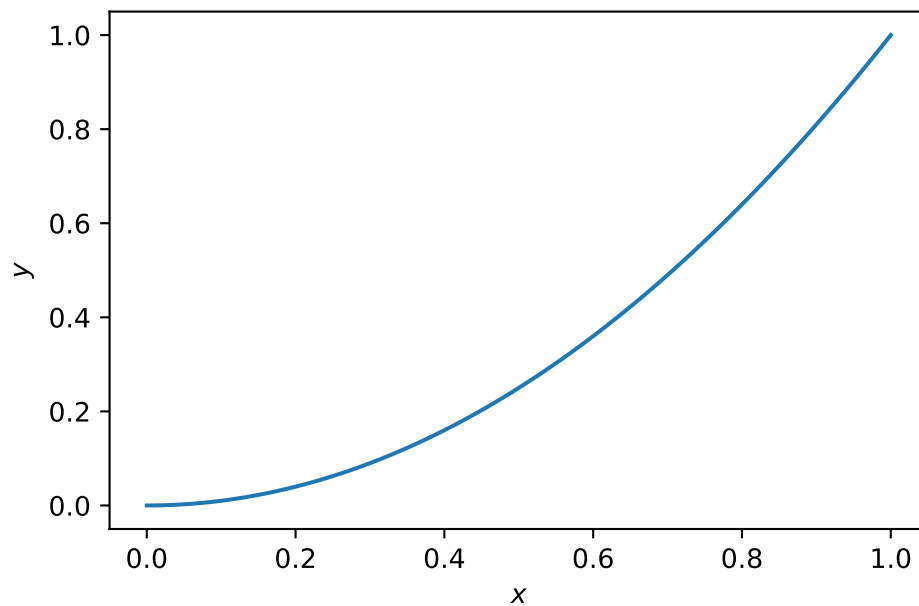
I have folded the code in the .html file.



Figure 2.1: A plot of $y(x) = x^2$ against $x$. Equation 2.1 was plotted. $k = 1$.

> 💡 Tip
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> Caption: - succintly describe the figure - state what variables are plotted - use cross-referencing to connect to the text - Provide additional data needed to reproduce the

figure (e.g. state parameter value or provide a reference to a table of parameter values.)

# 3 Summary

Revisit the main narrative.

Overview the topic once more.

Reflect on your work (did you address the aims outlined at the start? what were the main successes/challenges)

What are the main limitations of the work? What would the next steps be?

Knuth, Donald E. 1984. "Literate Programming." *Comput. J.* 27 (2): 97–111. https://doi.org/10.1093/comjnl/27.2.97.