

# My title

My subtitle if needed

First author

Another author

December 4, 2024

First sentence. Second sentence. Third sentence. Fourth sentence.

## 1 Introduction

Overview paragraph

Estimand paragra

Results paragraph

Why it matters paragraph

Telegraphing paragraph: The remainder of this paper is structured as follows.

## 2 Data

### 2.1 Overview

Overview text

### 2.2 Measurement

Some paragraphs about how we go from a phenomena in the world to an entry in the dataset.

## 2.3 Outcome variables

Add graphs, tables and text. Use sub-sub-headings for each outcome variable or update the subheading to be singular.

Talk more about it.

Talk way more about it.

## 2.4 Predictor variables

Add graphs, tables and text.

Use sub-sub-headings for each outcome variable and feel free to combine a few into one if they go together naturally.

# 3 Model

## 3.1 Model set-up

Define  $y_i$  as the number of seconds that the plane remained aloft. Then  $\beta_i$  is the wing width and  $\gamma_i$  is the wing length, both measured in millimeters.

$$y_i | \mu_i, \sigma \sim \text{Normal}(\mu_i, \sigma) \tag{1}$$

$$\mu_i = \alpha + \beta_i + \gamma_i \tag{2}$$

$$\alpha \sim \text{Normal}(0, 2.5) \tag{3}$$

$$\beta \sim \text{Normal}(0, 2.5) \tag{4}$$

$$\gamma \sim \text{Normal}(0, 2.5) \tag{5}$$

$$\sigma \sim \text{Exponential}(1) \tag{6}$$

### 3.1.1 Model justification

We expect a positive relationship between the size of the wings and time spent aloft. In particular...

We can use maths by including latex between dollar signs, for instance  $\theta$ .

## **4 Results**

## **5 Discussion**

### **5.1 First discussion point**

If my paper were 10 pages, then should be at least 2.5 pages. The discussion is a chance to show off what you know and what you learnt from all this.

### **5.2 Second discussion point**

Please don't use these as sub-heading labels - change them to be what your point actually is.

### **5.3 Third discussion point**

### **5.4 Weaknesses and next steps**

Weaknesses and next steps should also be included.

## **Appendix**

### **A Additional data details**

### **B Model details**

#### **B.1 Posterior predictive check**

#### **B.2 Diagnostics**

## C References