

This is the title of this document

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Abstract

This is a demo of L^AT_EX

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1 Introduction

This introduces the document. We'll have a lot of text in section 2, which starts on page 2.

2 Main Part

2.1 Big paragraphs

Detection of genetic factors influencing complex traits is challenging, possibly because each single marker or gene has only a small effect on risk. Interactions between genes may have potentially larger disparities in disease risk between genotype groups (?) than are possible for any single locus, and therefore it is tempting to look for interactions between genes in the hopes of finding such effects.

Genetic variation between individuals can be measured by genetic markers: DNA sequences at known locations which are variable in the population. Using binary single nucleotide polymorphisms (SNPs) (markers at which there are normally only two possible variants, or alleles, in the population), it is becoming increasingly feasible to obtain data (genotypes) for hundreds of thousands of markers simultaneously. Any strategy of searching for interactions among a large set of variables will incur an extremely heavy penalty for multiple testing. Even when considering only two-way interactions, the number of potential interactions is $m(m - 1)/2$ for m markers. If there is sufficient knowledge about gene function to group genes into functional sets, then examination of a limited set of potential interactions may be possible. However, when such prior knowledge is not available, all possible combinations of markers must be tested in order to find new potential interactions.

2.2 Small paragraphs

This is in a new paragraph.

This is a 95% confidence interval: [2.1, 3.6].

3 Environments

3.1 Enumerate

1. This is the first item.
2. This is not item 1.

α	A	alpha	ν	N	nu
β	B	beta	ξ	Ξ	xi
γ	Γ	gamma	o	O	omicron
δ	Δ	delta	π	Π	pi
ϵ	E	epsilon	ρ	P	rho
ζ	Z	zeta	σ	Σ	sigma
η	H	eta	τ	T	tau
θ	Θ	theta	v	Υ	upsilon
ι	I	iota	ϕ	Φ	phi
κ	K	kappa	χ	X	chi
λ	Λ	lambda	ψ	Ψ	psi
μ	M	mu	ω	Ω	omega

Table 1: The Greek alphabet.

3.2 Itemize

- This is the first item.
- This is another bullet.

3.3 Description

Item 1 This is the first item.

Item 2 This is another bullet.

3.4 Verbatim

```
readdata <- function(filename, depth = 7) {
  str <- file(filename, "rb")
  on.exit(close(str))

  counts <- list()
```

The URL for our class is <http://www.stats.uwo.ca/faculty/murdoch/latex>.

3.5 Tabular

This is some text referring to table 1.

4 Math

Let $X \sim N(0, 1)$ and $Y \sim \text{Exponential}(\mu)$. Let $Z = \sin(X)$. \sqrt{X} .

Sometimes you want to display an equation:

$$e = mc^2 \tag{1}$$

Some equations have no number:

$$e^{2\pi i} = 1$$

In equation (1) e means energy.

A common mistake: Element A_{ij} of the matrix is 1.

Fractions can be written in two ways:

$$\begin{aligned} \pi &\approx 355/113 \\ &\approx \frac{22}{7} \end{aligned} \tag{2}$$

$$\left(\sum_{i=1}^{\infty} 1/i \right) = \infty \tag{3}$$

The sum of $1, \dots, n$ is $1 + \dots + n = n(n+1)/2$.

The approximate value of π is $\frac{22}{7}$.

5 Figures



