

Lecture 1

niceguy

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Course Goals

- R, Functional Programming
- Visualise, Process, and Analyse tabular data
- Predictive Modeling

Introduction

I'm assuming you have previous coding experience, so I'll skip the basic stuff.

Comments

start with #

```
# Hi, I'm a comment
```

Print

Use cat to print statements

```
cat("Hello World!") # no semicolon at the end
```

```
## Hello World!
```

Variables

```
# We use <- (ALT - ) for assign, instead of =
```

```
engsci_adj <- -12
```

```
x <- 97 + engsci_adj
```

```
# These are displayed in the Environment
```

To run a line, use CTRL ENTER, to run a code chunk, use CTRL SHIFT ENTER.

Functions

Let's say we want to see if

$$ax^2 + bx + c = 0$$

has real roots or not.

```
no_roots <- function(a, b, c){  
  # Boolean of whether or not discriminant is negative  
  b**2 - 4*a*c < 0  
}
```

```
# return not needed  
}
```

Conditionals

```
exam_grade <- 94  
  
# C-like syntax  
  
if(exam_grade >= 95){  
  cat("Yay")  
}else if(exam_grade >= 94){  
  cat("OK")  
}else{  
  cat("Drop out")  
}
```

```
## OK
```