CSC108H
Introduction to
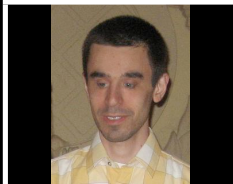# Computer Programming

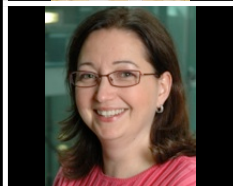|	
Michelle Craig: mcraig@c.toronto.edu Mississauga Campus	
Steve Engels St. George Campus	Michael Szamosi Scarborough Campus
Daniel Zingaro St. George Campus	Cathy Jansen Scarborough Campus
Diane Horton St. George Campus	
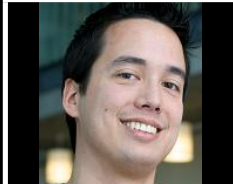
Today

- Learn what CSC108H is about.

- A few admin details to get you started.

- Get our feet wet with a first program.

- Remaining admin details on Friday.

This Course

- Teaches the basics of programming in Python

- Is intended for students with no programming experience

- 3 lecture hours per week

- 2-hour lab each week
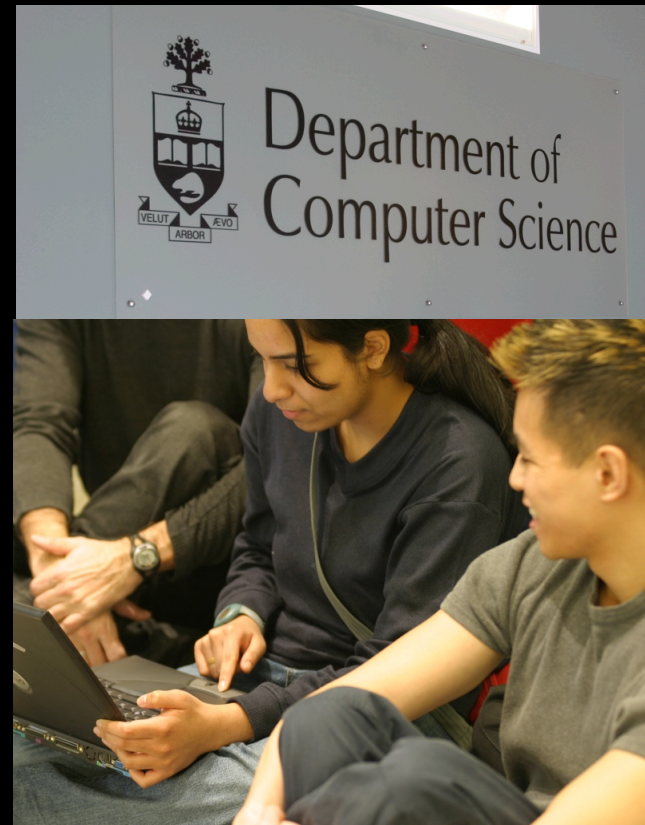
What's CSC108 About?

At the end of this course, you will

- know most python instructions

- be able to take human problems and write Python programs that solve them

- have a sense of what computer scientists do

- have an appreciation for how computer science research applies to fields such as medical science, astronomy, physics, and bioinformatics

Coursework Overview

| Work	Weight	Comment
Assignments (3)	30%	10% each
Tests (2)	20%	In lecture, 10% each
Labs (11)	5%	Each is worth 0.5% (best 10 of 11)
CodeLab (11)	5%	Each is worth 0.5% (best 10 of 11)
Final exam	40%	You must get ≥ 40% to pass 108

What about the "tutorial" on ROSI?

- 3-4 Wednesdays - starting today CC 1080
- CS Cohort Seminars
  - Get to know fellow CS students
  - Learn some useful skills
  - Meet alumni, important staff, other faculty
  - Not really part of 108 but worth attending!!

What Sorts of Problems?

- Remove red-eye from a picture

- Find the complement of a DNA strand

- Display maps with airplane flight paths

- Hide a poem in a picture
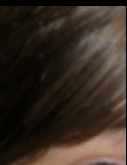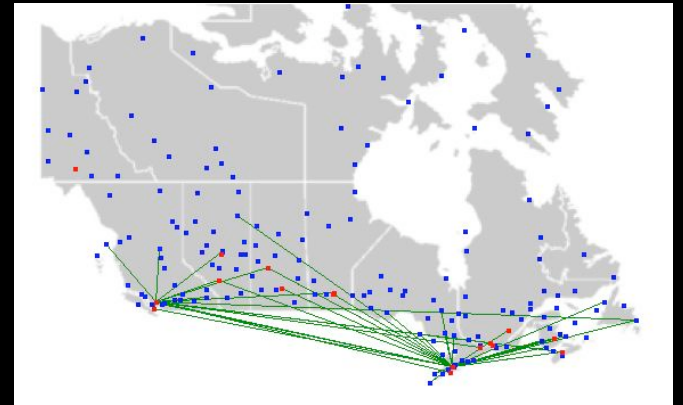
Task: Daytime to Sunset
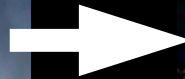
Make a picture taken during the
day look like it was taken at sunset.

Pictures and Pixels

- Digital images are made up of pixels, which are tiny dots.

- That's what 1024 x 768 resolution means: 1024 pixels wide, 768 pixels high

- Pixel (0, 0) is upper left

- Pixel (1023, 0) is upper right

- Pixel (0, 767) is lower left

- Pixel (1023, 767) is lower right
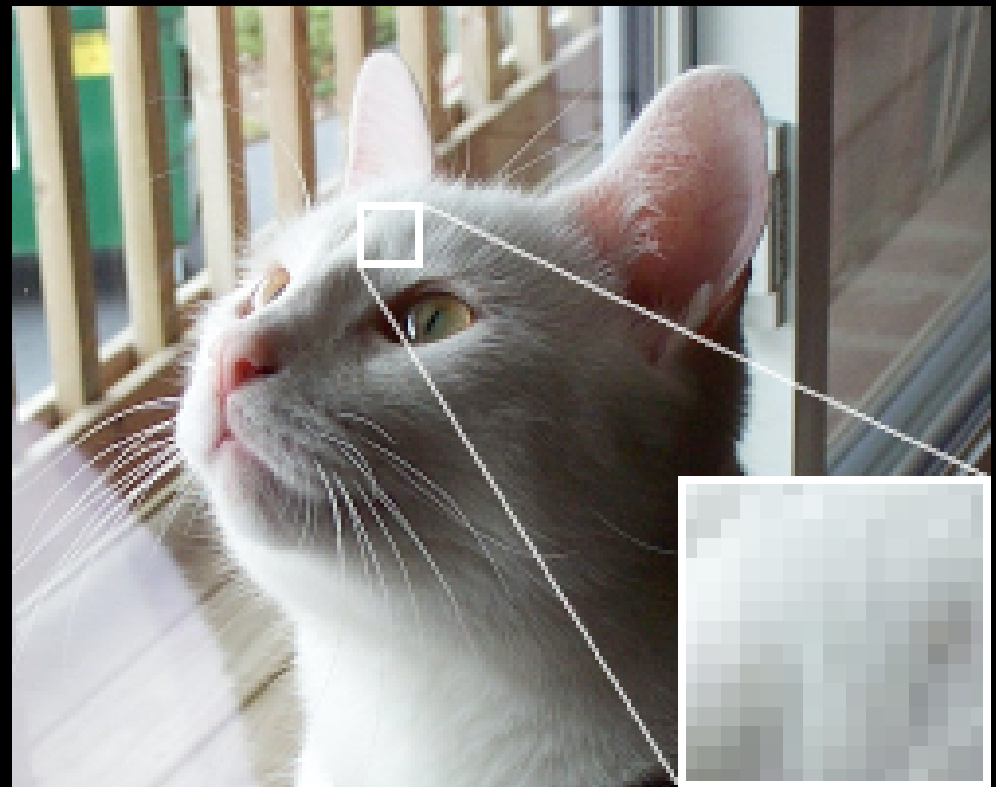
Colour Representation

- Colours: combinations of red, green, and blue

- Each component has intensity in range 0 - 255

- Red: (255, 0, 0)

- Green: (0, 255, 0)

- Blue: (0, 0, 255)

- White: (255, 255, 255)

- Black: (0, 0, 0)