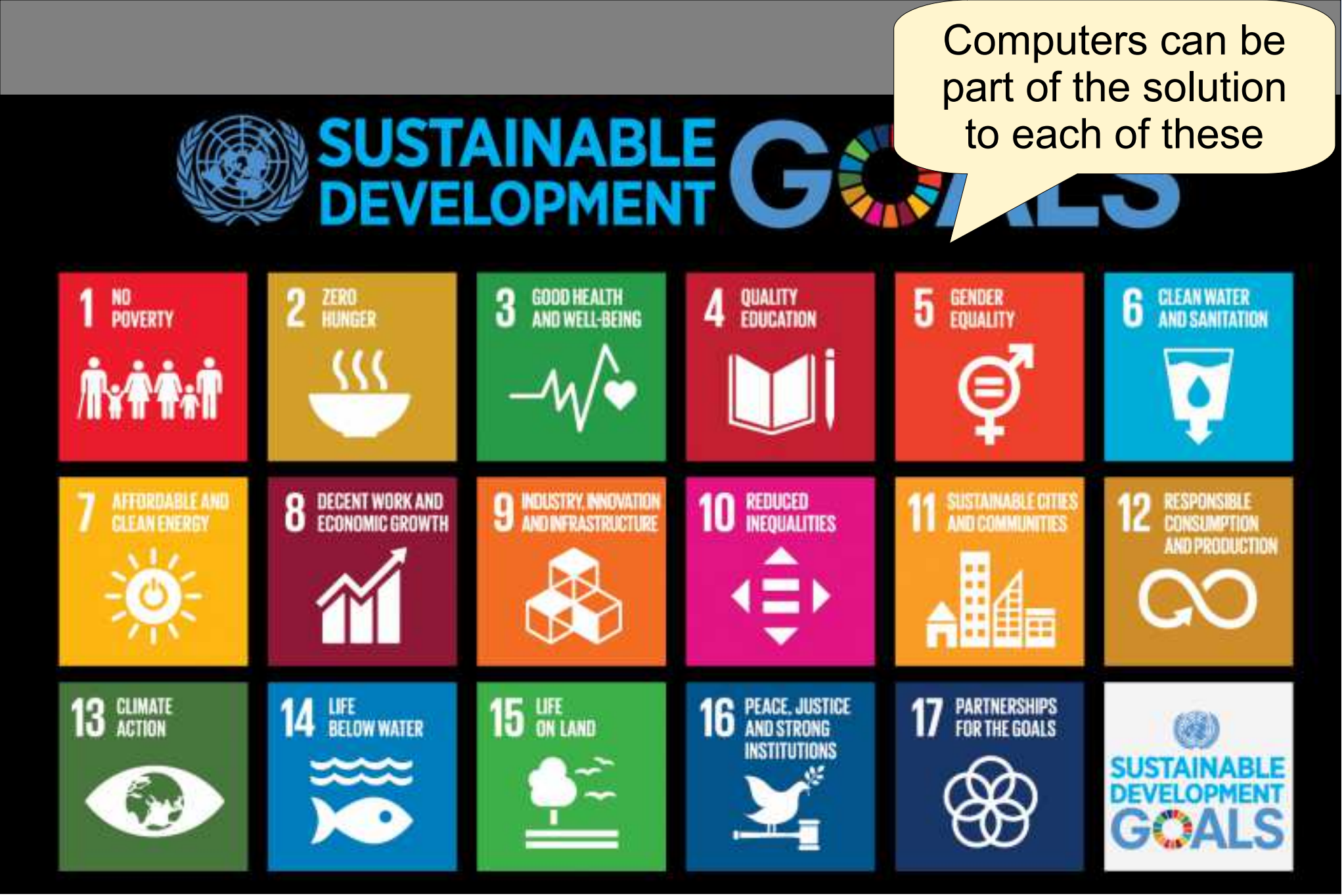
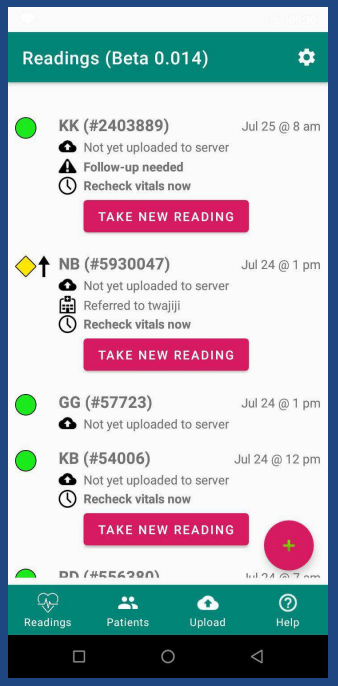

Computers can be part of the solution to each of these
SUSTAINABLE DEVELOPMENT GOALS
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS

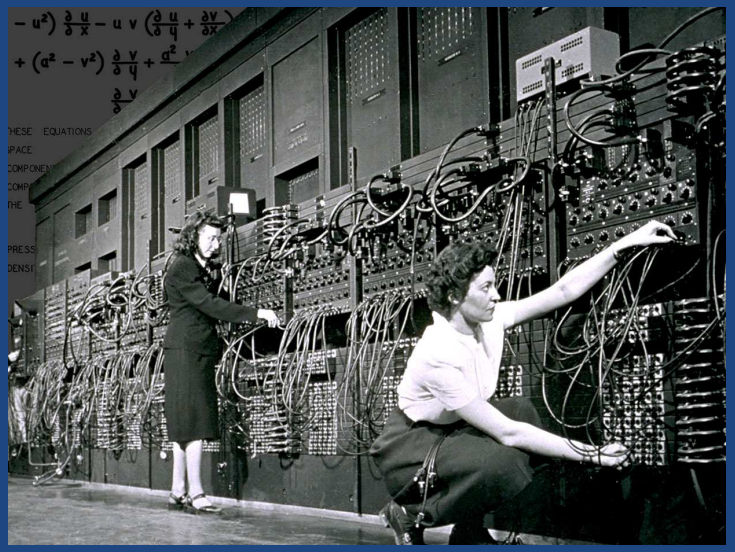
Solving problems of social value

- Computers are a tool to change the world
  - Programming is how you get full control.
  - We can help people.



Topics

1) Who's Dr. Brian?
2) Whats in CMPT 130?
3) Who are the students?
4) How do I succeed & connect?

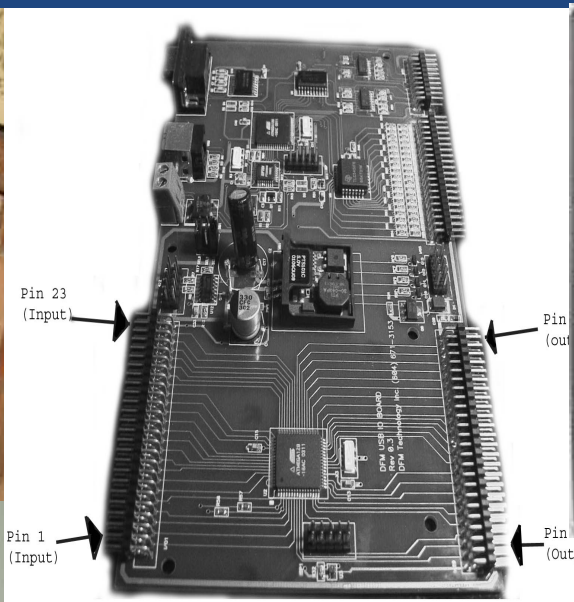


ENIAC computer - 1945

Who’s Dr. Brian?

Dr. Brian (Fraser) (he/him)

- I love questions and feedback!



About Me

- Love Teaching: I can help share my excitement for programming, and for making the world a better place.
- Degrees: BSc & PhD from SFU (AI)
- Favourite Video Game:
  StarCraft 2, WoW, Valheim, Mario Kart
- Family: Married with 2 girls (10y & 12y)
- I recognize that I am privileged to be in my position with many advantages afforded to me throughout my life.
  - I work to build a positive inclusive experience for everyone.

Course Expectation

- Only one thing
  - Use a positive tone for all communication (asking questions, on Piazza forums, with TAs)
  - Anon trolling hurts and won't be tolerated
  - Students have wide range of backgrounds; respect it
- If sending a message
  - Give a little context (class, your name, topic, ...)
  - Email: If you are sending more than 2 per week on average, over multiple weeks, it may be too many.

What's in CMPT 130?

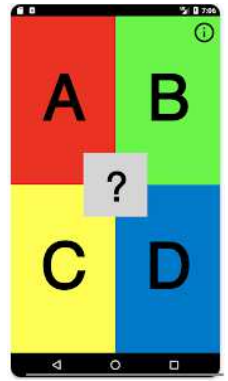
Course Topics

- Basic Course Goal
  - Solving problems of social value
  - Thinking through problems: Programming in C++
  - Simple data structures
  - Algorithms

Flipped Classroom

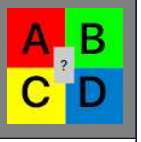
- "Notes" Videos
  - Pre-recorded videos; usually posted by Friday
  - You should watch these before class (~1h)
- Lecture (M/W/F) - Live Coding / Activities
  - Interactive coding and activities to engage content
  - Recorded and posted online
- Labs
  - Guided activities; one per week to get started
- Assignments
  - One every 2 weeks
  - Practice applying skills more independently

ABCD Card App



https://cii.wwu.edu/ABCD/

ABCD Interactive Lectures



- Lectures will have
  - Lots of coding!
  - Lots of questions!
  - Lots of interactions!
- Who is the official mascot of Linux?

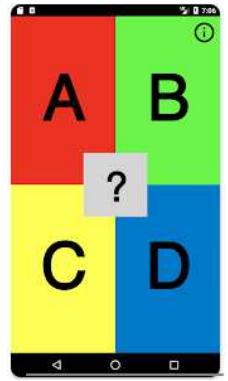
A 

B 

C 

D 

ABCD Card App



https://cii.wwu.edu/ABCD/

2 Week for Assignments

	Mon	Tue	Wed	Thur	Fri	Sat	Sun
Week n	**Lecture:** Coding + Activities		**Lecture:** Coding + Activities **Lab**		**Lecture:** Coding + Activities		**Lab** due
Week n+1	**Lecture**: Coding + Activities		**Lecture**: Coding + Activities **Lab**		**Lecture**: Coding + Activities		**Assignment** due **Lab** due
	...	...	...	...	...	...	...

Next Wed: Quiz on previous assignment

Last day to hand in assignment (3 days late if you have enough late days)

Weekly Expectations

- 3 Units = ~9-10 hours / week
- Your week might look like:
  - Sunday: watch videos 30m
  - Monday: lecture 1h
  - Tuesday: watch video 30m
  - Wednesday: lecture, attend lab 2h
  - Thursday: try assignment, complete lab 2h
  - Friday: lecture 1h
  - Weekend: work on assignment 3h

Assignments

- Programming is like driving a car:

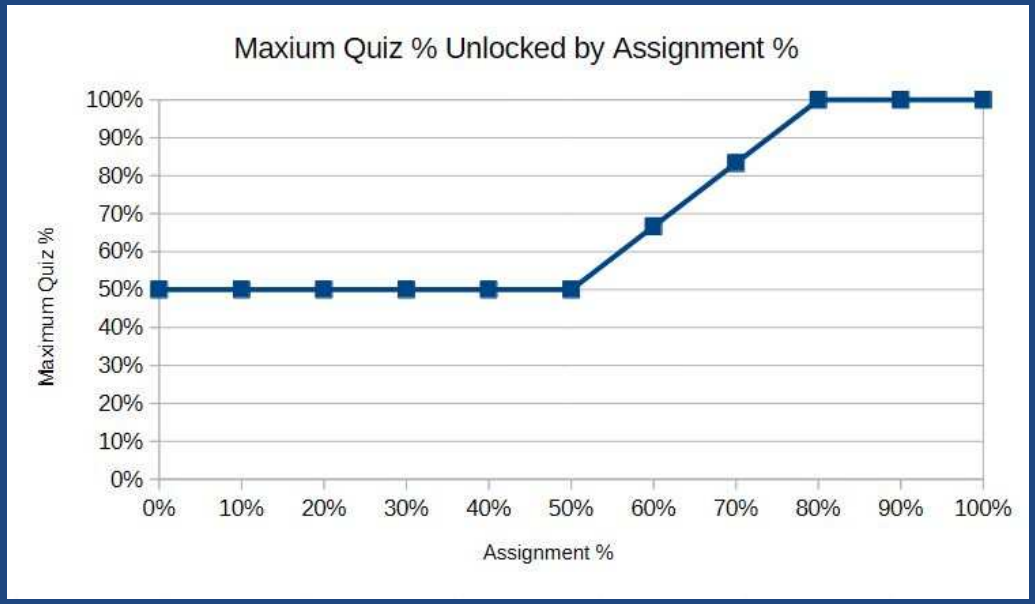
- ~5 Assignments / Project
  - They tell you what to do, not how; you write code to solve the problem
  - You can't really say you know the course material unless you can do (re-do?) the assignments well!
- Generative AI
  - You may use AI to help understand, not write code
- It's cheating to submit someone else's work
  - We check carefully & apply stiff penalties
  - It's also cheating to submit you previous work again

Evaluation

- 10% Labs
  - Most weeks (starting next week)
  - **Mandatory attendance**; OK to attend other sections if space.
  - **Submit lab online** by Sunday
  - Marks: half attendance, half completion.
- 30% Quiz (based on Assignments)
  - Assignment due about every 2 weeks; on Sunday
  - Following Wednesday has a short in-class quiz
- 25% Midterm
  35% Final

Assignments Unlock Quiz Scores

- Coding is critical to learning the material
  - AI systems (like ChatGPT and Copilot) can do all the coding for this course very well!
  - You cannot let AI write your code for you.
- Assignments are worth 0% on their own:
  - Quiz content pulled from assignment.
  - Quiz max score is 50% unless you score >50% on assignment.

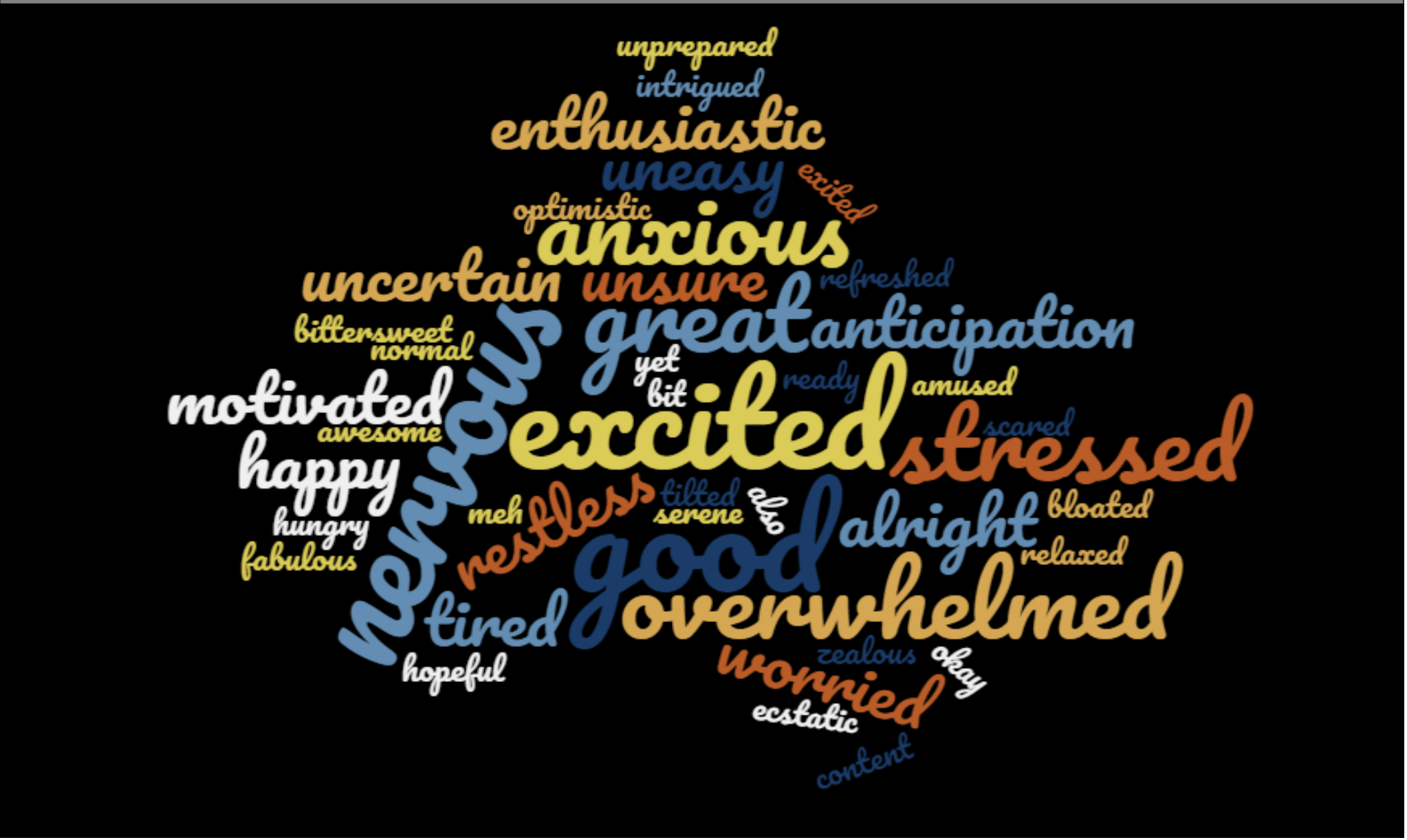


Policies

- Must pass exams
  - Students must attain an overall passing grade on the weighted average of exams (midterm and final) in the course in order to get a D or higher.
- Late Policy
  - 60 minute grace period for labs & assignments.
  - Attending lecture earns 6h of late days.
  - Can use up to 3 days late per assignment.
- AI
  - AI may not be used to write labs or assignments.

Who are the students?

How are you feeling?



You already known:

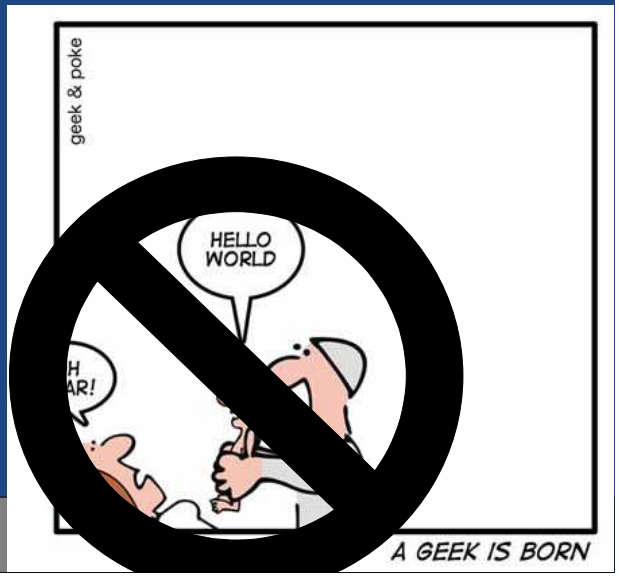
- How to use a computer and the web.
  - You are comfortable using directories/folders to find, create, copy and edit files.
  - You can check email and browse the web.
- You are eager to learn problem solving & programming
  - Course is a rigorous introduction to programming.
  - It assumes no previous programming experience, nor experience with Linux.
  - Expect to put in a strong effort to learn programming.

Real-time Stand-up Survey

- Everyone stand up!
- How much programming have you done? (in any language)
  - None?
    - This is the right class for you to start your journey! Have a seat.
  - Some experience, but not a lot?
    - This is the right class for you to build your skills! Have a seat.
  - A lot!
    - This is the right class for you to help others! Have a seat.
- Lecture is for participation for everyone.

Growth Mindset

- Programming is skill a person develops;
  not one they were born with.
  - Nobody was *born* being good at C++.
  - Nobody was *born* being bad at C++.
  - Everyone good at C++ has worked hard and learned it.
- Computer Scientists learn helpful dispositions such as:
  - Collaborative
  - Inventive
  - Persistent
  - Meticulous
  - ...



AI

Show AI and Learning Slides.

How to Succeed
+
Make Connections

Stay home sick

- Stay home when needed
  - Feeling a little sick?
    Covid, cold or the flu!
    You should stay home
    and watch the video too!

- If I'm sick, I'll cancel lecture, present remotely,
  or record a video

Guide to Slides

- Slide Colour Guide (often...):
  - Green: headings.
  - Yellow: Highlighted text.
    - Course has: midterm, quizzes, & final.
  - Blue: Term being defined.
    - Hour: 60 minutes.
  - Sweep-in Text: Blanked out text.
- Joke:
  - There are 10 types of people in the world...

Advice

- Previous Students have said about this course
  - Useful, practical course;
    May help you love programming
  - Easy start, gets really challenging really fast
  - Time consuming assignments
  - Tough but fair exams
  - Live long and prosper
    (Star Trek: technology
    for social good?)

Connecting

- Connect with Me
  - Come chat after class
  - Come to Lunch with Dr. Brian
- Connect with Help
  - Come to lectures & labs
  - Come to my & TA online office hours (Discord)
- Start connecting early
- Start your assignments early

Meeting Someone!

Start chatting in groups of 3-4

- Exchange names and contact info
  (email/discord/whatsapp/instagram/X/?)
- Discuss the following:

1. What is the
   best thing computers have been used for?

2. What is the
   worst thing computers have been used for?