Intro to Programming (No Prior Experience)

CSCI-UA.0002-011

Emily Zhao

T/R 4:55PM-6:10PM

Emily Zhao (she/her)

Background

— BFA in Film + Television Production

— MPS in Interactive Telecommunications (aka Art + Tech)

My Work

— Computationally generated visuals

— Text and storytelling in the browser

— Games + other interactive experiences

Code has so many different applications!

Let's get to know you!

pollev.com/emilyzhao

Rules of Play

— Be on time

— Respect your peers + respect yourself

— Be curious; ask questions

> My children like to play an age-old game with me called, “Why?” I’ll tell them, for instance, that I need them to finish breakfast, and they’ll say why, and I’ll say so that you receive adequate nutrition and hydration, and they’ll say why, and I’ll say because as your parent I feel obligated to protect your health, and they’ll say why, and I’ll say partly because I love you and partly because of evolutionary imperatives baked into my biology, and they’ll say why, and I’ll say because the species wants to go on, and they’ll say why, and I’ll pause for a long time before saying, “I don’t know. I guess I believe in spite of it all the human enterprise has value.” And then there will be a silence. A blessed and beautiful silence will spread across the breakfast table. I might even see a kid pick up a fork. And then, just as the silence seems ready to take off its coat and stay awhile, one of my kids will say, ‘Why?’

–exerpt from *Sycamore Tree* by John Green

Ask Questions

How class works

— Lectures are in the modules

— In-class review + programming exercises

— Weekly programming workshop for assignments

Class Website

emilydidthis.github.io/CSCI-UA.0002-Fall22

What is programming?

What is programming?

— Instruction for the computer to perform certain tasks

Draw a rectangle.

Draw a rectangle.

— A human will do it with uncertainty.

— A computer will refuse.

Code as a language

Code as a language

— The language of being specific

— The language of abstraction

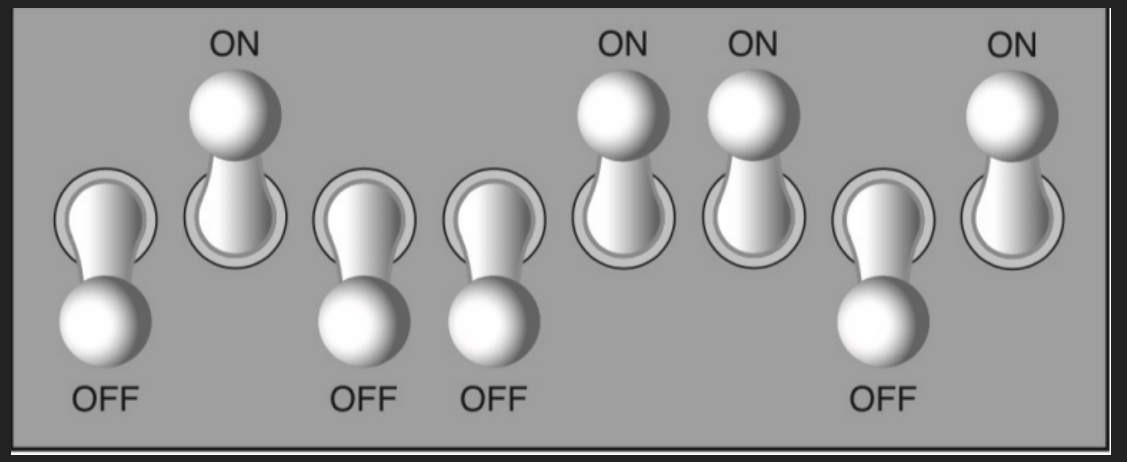
Computers aren't smart.

It's all ones and zeros

— Binary language: "0" and "1" (which really correspond to electrical impulses +5v / -5v)

— Bit: 1 | Byte: 01001011

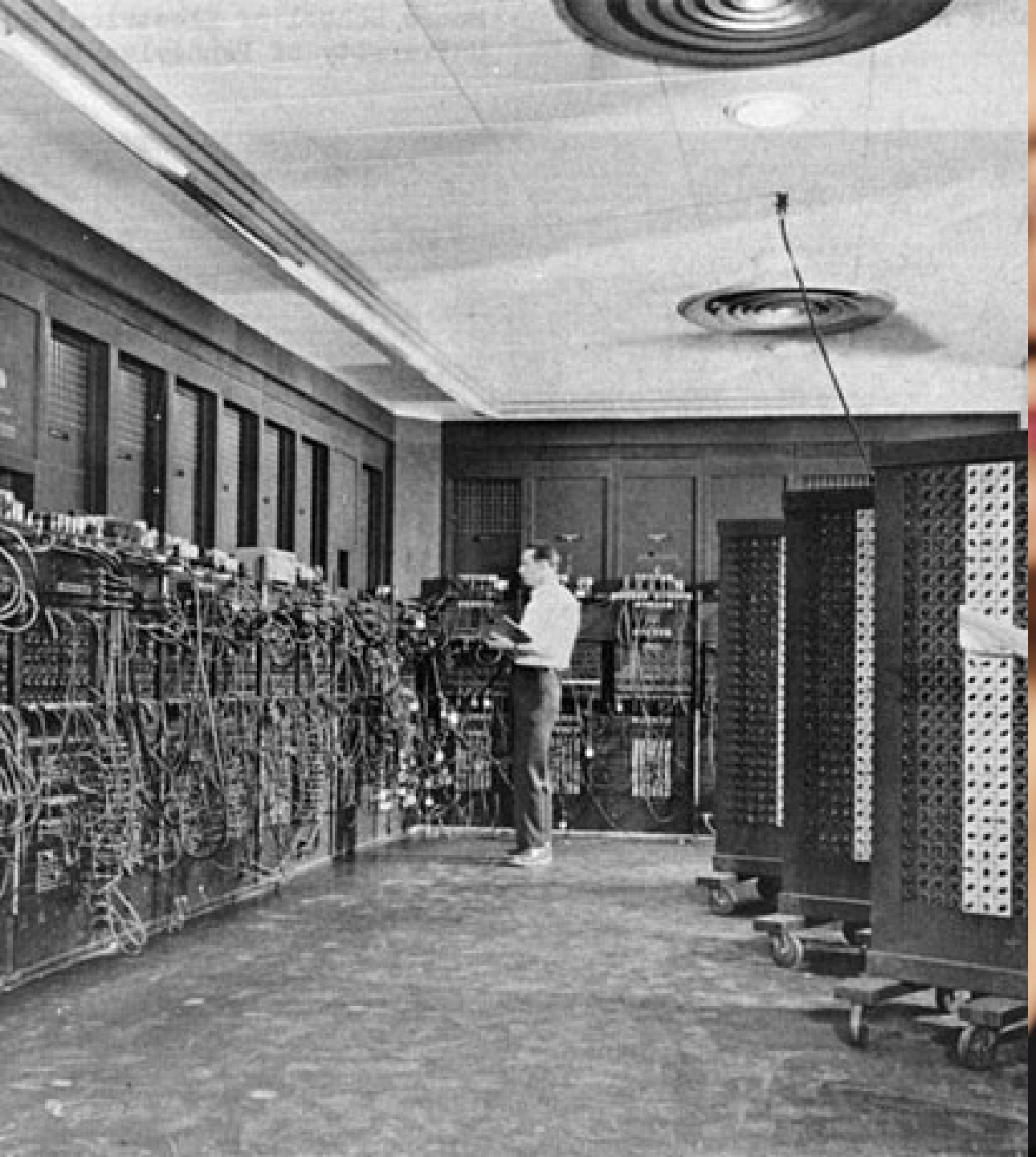
— 1 byte has the possibility of 256 unique "states"

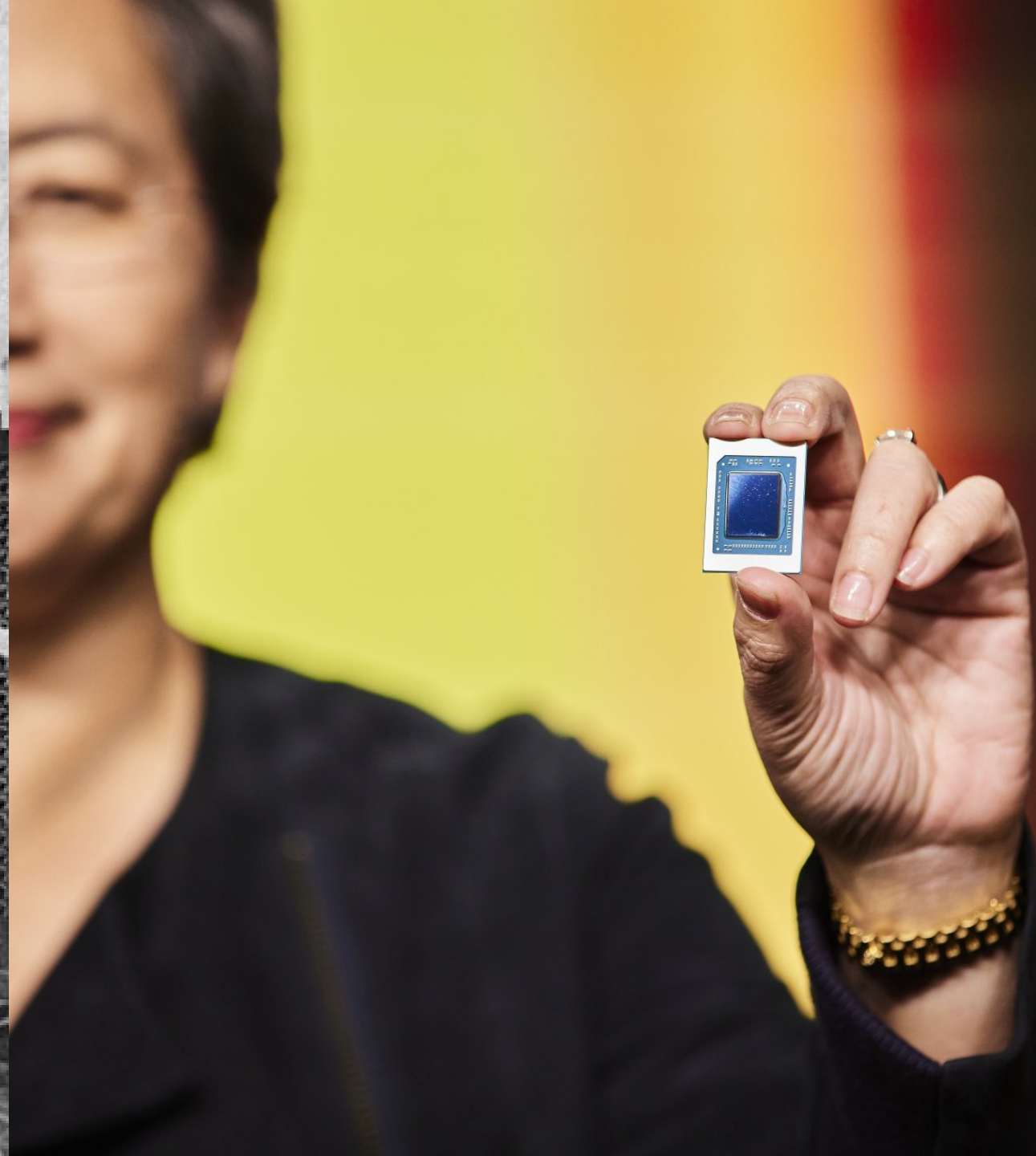


Punch Card in Punch Card Machine

Computers aren't smart.

They're just really really really really really fast (now)!





Program a rectangle.

Python

- This semester we will be working with Python
- Used extensively as both a production language as well as a teaching language
- IDLE: Integrated Development Environment

For next time

— Peruse the class website, common syllabus, and Brightspace

— Begin "Self-Paced Learning Module #1", ask a question on ED, and take the quiz