CS 103000
Prof. Madeline Blount

Week 2: VARIABLES

ATTENDANCE:

https://cs103-proton.glitch.me/

Dall-E 2: cats learning C++ in the forest on '90's technology

🧹 housekeeping:

LATE WORK:

- Everything is due on date listed on zyBooks (usually Wed. evening reading, Fri. evening labs)
- Work drops 10% every 1 day (24hrs) after deadline
- ✉️ **If you want credit for late work, you will need to e-mail me once you have completed it.**

THE
NEW YORKER

SCIENCE AND TECH   Can Computers Learn Common Sense?   The Ocean's Most Delicate Species   The Science

One day in late December, I downloaded a program called Whisper.cpp onto my laptop, hoping to use it to transcribe an interview I'd done. I fed it an audio file and, every few seconds, it produced one or two lines of eerily accurate transcript, writing down exactly what had been said with a precision I'd never seen before. As the lines piled up, I could feel my computer getting hotter. This was one of the few times in recent memory that my laptop had actually computed something complicated—mostly I just use it to browse the Web, watch TV, and write. Now it was running cutting-edge A.I.

9.99 $6.

THE
NEW YORKER

Gerganov, to modify the program. Gerganov converted Whisper to C++, a widely supported programming language, to make it easier to download and run on practically any device. This sounds like a logistical detail, but it's actually the mark of a wider sea change. Until recently, world-beating A.I.s like Whisper were the exclusive province of the big tech firms that developed them. They existed behind the scenes, subtly powering search results, recommendations, chat assistants, and the like. If outsiders have been allowed to use them directly, their usage has been metered and controlled.

```
int score = 0;
```

declaration

initialization

ASCII =
American
Standard
Code for
Information
Interchange

1000011   1100001   1110100   0100001

67	97	116	33
C	a	t	!

Binary	Dec	Char	Binary	Dec	Char	Binary	Dec	Char
010 0000	32	space	100 0000	64	@	110 0000	96	`
010 0001	33	!	100 0001	65	A	110 0001	97	a
010 0010	34	"	100 0010	66	B	110 0010	98	b
010 0011	35	#	100 0011	67	C	110 0011	99	c
010 0100	36	$	100 0100	68	D	110 0100	100	d
010 0101	37	%	100 0101	69	E	110 0101	101	e
010 0110	38	&	100 0110	70	F	110 0110	102	f
010 0111	39	'	100 0111	71	G	110 0111	103	g
010 1000	40	(	100 1000	72	H	110 1000	104	h
010 1001	41	)	100 1001	73	I	110 1001	105	i
010 1010	42	*	100 1010	74	J	110 1010	106	j
010 1011	43	+	100 1011	75	K	110 1011	107	k
010 1100	44	,	100 1100	76	L	110 1100	108	l
010 1101	45	-	100 1101	77	M	110 1101	109	m
010 1110	46	.	100 1110	78	N	110 1110	110	n
010 1111	47	/	100 1111	79	O	110 1111	111	o
011 0000	48	0	101 0000	80	P	111 0000	112	p
011 0001	49	1	101 0001	81	Q	111 0001	113	q
011 0010	50	2	101 0010	82	R	111 0010	114	r
011 0011	51	3	101 0011	83	S	111 0011	115	s
011 0100	52	4	101 0100	84	T	111 0100	116	t
011 0101	53	5	101 0101	85	U	111 0101	117	u

Unicode Consortium

(more bits, up to 32 - many more characters)

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