

A proposed study: Awareness and perceptions of generative AI usage for supporting learning

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Rubber duck debugging

Stuck on a problem? Describe it to a rubber duck!

CS50.ai

CS50's adaptation of **ChatGPT** for students and teachers **beta**
with support from [Microsoft](#) and [OpenAI](#)

 Log In



CS50 duck

Harvard University's AI chatbot for
CS50: Introduction to Computer
Science



CS50 Bot

Yesterday



ENDORSED



3



It seems like you're trying to declare the `main` function with only one parameter. However, in C, the `main` function should have either zero parameters or two parameters, which are `int argc` and `char *argv[]`. The first parameter, `argc`, represents the number of command-line arguments, and the second parameter, `argv`, is an array of strings representing each of those arguments.

For the Caesar problem, you'll want to use these parameters to access the command-line argument that represents the key. To do this, you should declare your `main` function as follows:

```
int main(int argc, char *argv[])
{
    // Your code here
}
```

Then, you can check if the user has provided the correct number of arguments (in this case, just one additional argument for the key) and handle the input accordingly.

P.S. I am an experimental bot. Quack. Do not assume that my reply is accurate unless you see that it's been "endorsed" by (human) staff. Quack.

[Comment](#) [Edit](#) [Delete](#) [Unendorse](#) ...



Add comment



John Harvard **STUDENT** 1d

Thank you, weirdly informative robot



8 [Reply](#) [Edit](#) [Delete](#) ...

CS50 duck

- "ChatGPT can be too helpful"
- "The CS50 duck, by contrast, provides helpful hints and guides students to an answer"

Auto-Generate Discussion

Define the discussion

Description

Enter a description or set of keywords...

Desired cognitive level

Apply

Inspire me!

Apply

Analyze

Evaluate

Create

ⓘ This is auto-generated content and needs to be checked for accuracy.

Case Study Analysis: Expanding into a New Market

- Imagine you are a consultant for a multinational corporation. Apply your understanding of international business concepts, apply your understanding to analyze the potential risks and opportunities of expanding into a new market. Use diagrams, reference lists, or real-life experiences to support your analysis. Discuss strategies that may impact the success or failure of the expansion. Discuss strategies for entering a new market.

Simulating Global Supply Chain Challenges

- Imagine you are a manager of a global supply chain for a multinational corporation. Simulate a scenario where unexpected challenges arise in the supply chain. Use work-related experiences, diagrams, or interviews with industry experts to support your analysis. Share your strategies for ensuring the smooth operation of the supply chain. Discuss the importance of effective communication, collaboration, and risk management.

Developing a Cross-Cultural Training Program

- In a global business environment, cultural intelligence is crucial for success. Develop a comprehensive cross-cultural training program for a multinational corporation. Discuss the importance of cultural intelligence in real-life situations. Use diagrams, reference lists, or real-life experiences to support your analysis.

<https://www.anthology.com/ai-design-assistant>

<https://www.anthology.com/blog/when-pedagogy-meets-technology-ai-generated-suggestions-for-authentic-assessments>

Students' views

HEPI Policy Note 51

- **More than half of students (53%) have used generative AI to help them with assessments.**
The most common use is as an 'AI private tutor' (36%), helping to explain concepts.
- **A 'digital divide' in AI use may be emerging.** Nearly three-fifths of students from the most privileged backgrounds (58%) use generative AI for assessments, compared with just half (51%) from the least privileged backgrounds.
- **Only a fifth of students (22%) are satisfied with the support they have received on AI.** Most students (62%) are neutral or say they do not know.

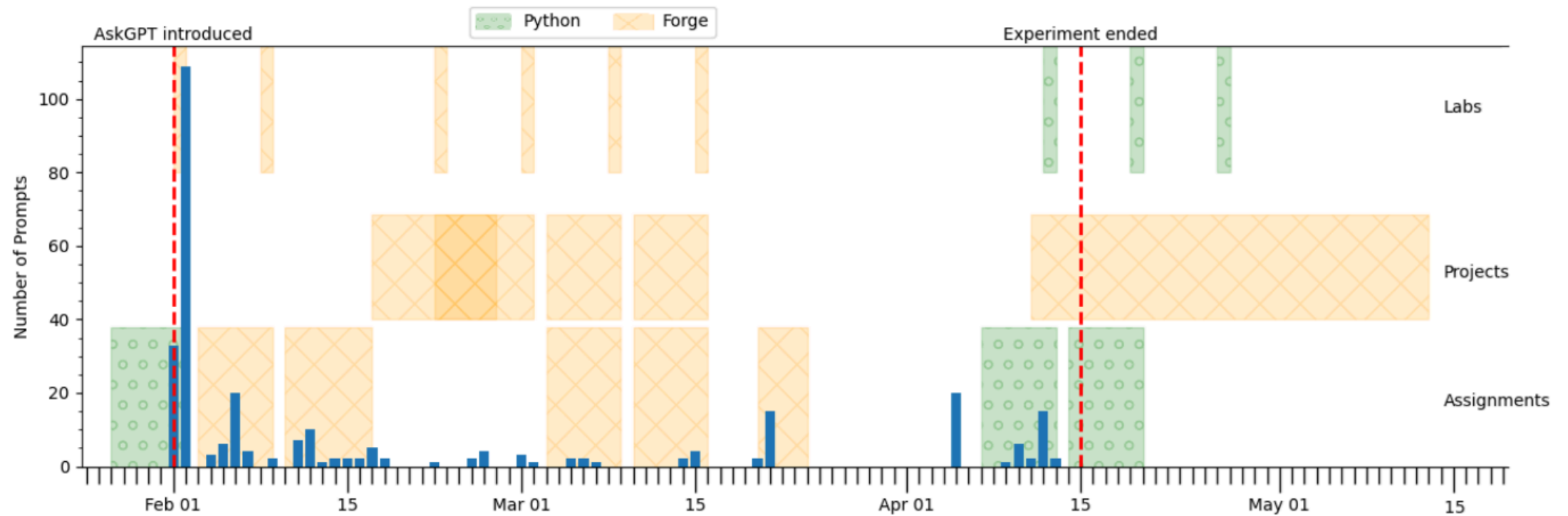


Figure 3: Number of student prompts to AskGPT per day, overlaid on an course schedule.

Student use of large language models

Student responses

- **P2:** "I learn better through struggling to find an answer. If it comes too easy, it's hard for me to remember any information I've learned."
- **P11:** "I have a vitriolic hatred toward AI."

Student use of large language models

Table 2: Reasons students did not use AskGPT.

Reason	Count	% Responses
May interfere with learning	25	57 %
Fear of breaking course rules	12	27 %
Awkward UI	9	20 %
Concerns about logging	7	16 %
Worse than alternatives	6	14 %
Responses were not useful	6	14 %
Did not want to use	4	9 %
Fear of overuse	4	9 %
Installation issues	2	5 %
Concerns about AI	2	5 %
Did not use VS Code	1	2 %

Student use of large language models

Educators' views

Luleå University of Technology staff survey

- 76.12% of the university teachers surveyed expressed willingness to encourage their students to use generative AI ethically.
- Over 50% currently use generative AI in some form.

Texas A&M University

- 47% are somewhat to extremely comfortable with students using ChatGPT in courses.
- 64% of faculty and 73% of students have used ChatGPT.

Purpose

- To inform generative AI-based pedagogical developments
 - University policy
 - Staff guidance and training
 - Integration into teaching and learning

Research themes

- Awareness and understanding
 - Common tools: ChatGPT, Microsoft Copilot
 - Embedded technology: Microsoft Word, Grammarly
- Usage patterns
 - Implicit versus explicit usage expectations

Research themes

- Trust and confidence
 - Ethical concerns
 - Domain expert knowledge
- Perceptions and anxiety
 - Breach of privacy
 - Confidence to ask questions
- Digital divide and equity of access
 - Accessibility and cost

Research themes

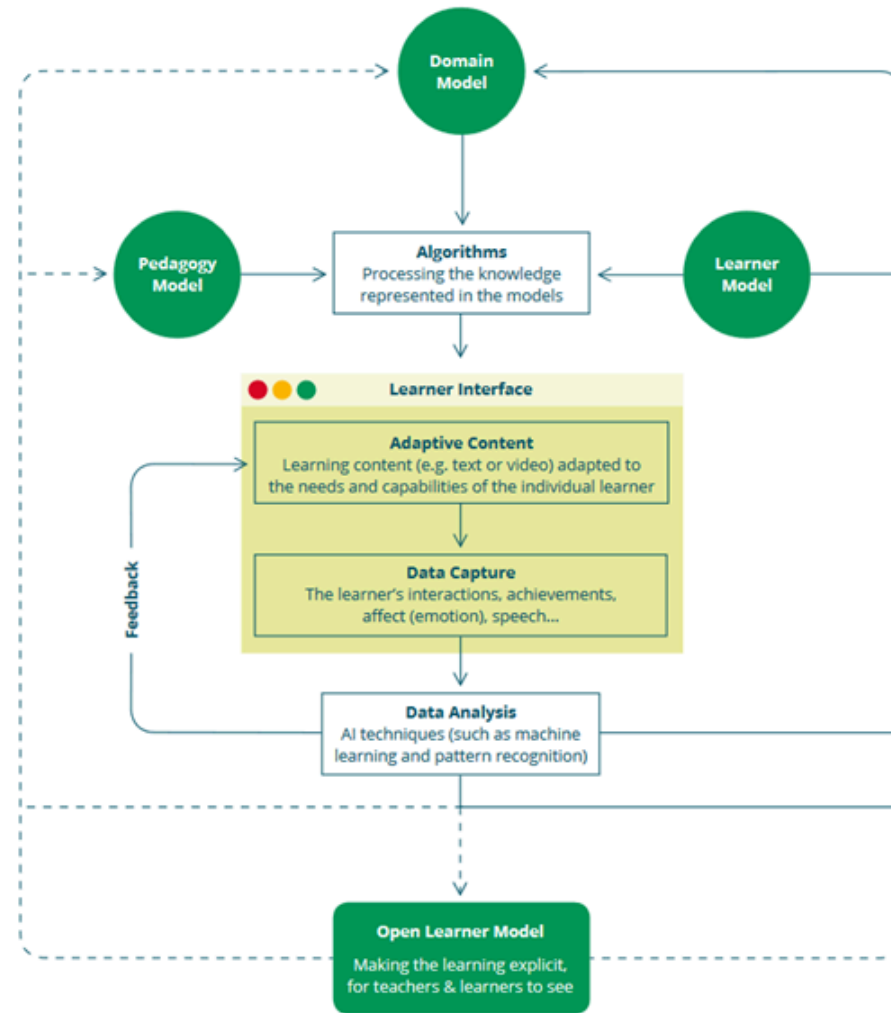
- Guidance
 - Supplementing university instructors and tutors
- Learning and teaching strategies
 - Fostering generative AI culture

Some literature

- Generation gap
- Artificial intelligence anxiety scale
- Intelligent tutoring systems
- Technology Acceptance Model links to an user acceptance perspective:
 - perceived usefulness
 - perceived ease of use

Figure 1

AIEd system showing a simplified picture of a typical model-based adaptive tutor.



A model-based adaptive tutor

Possible questions

- Do you think that generative AI will **replace skills** or **knowledge** that you are learning (or have learnt) from university?
- Will generative AI usage undermine your **learning experience**?
- How satisfied are you with your **university instructors**?
- Would you rely on generative AI as a **tutor** for your university subjects?
- What **concerns** do you have about using generative AI?

Logistics

- Multi-stage survey targetting students and educators
 - Current focus: statistics and data science
 - Future focus: ???

Participants

Currently targetting students from:

UK

University College London

Coventry University

Australia

La Trobe University

Federation University Australia

Macquarie University

Timeline: Student survey

- June: Pilot testing
- July - August: Survey launch phase 1
 - UK term 3: postgraduates
 - Australia semester 2
- September - December: Survey launch phase 2
 - UK term 1
- January - April: Survey launch phase 3
 - UK term 2

Timeline: Staff survey

- September: Pilot testing
- October - December: Survey launch

The end 🤔