

# Real Student Demand for AI-Powered Study Tools

## Breaking Down Complex Lecture Slides

University-level CS courses (like **Object-Oriented Programming** or **Data Structures**) often overwhelm students with dense slides and notes. Many learners express difficulty extracting clear study notes from these materials. For example, one Master's student admitted: *"I'm doing my master's and honestly struggling a bit with some of my professor's slides. They're full of info but not always clear, and I find it hard to make proper study notes from them"* <sup>1</sup>. To cope, they started using **ChatGPT** to summarize and explain concepts in simpler terms, effectively turning confusing slides into digestible explanations <sup>1</sup>. This student was essentially seeking an AI tool that could *"break slides down into clear, easy-to-understand notes," "explain concepts in a simple way when needed,"* and even *"create flashcards or questions"* for review <sup>2</sup>. Such posts highlight a real need for AI assistants to **clarify lecture content** and generate study aids from verbose course slides.

## Summarizing Notes and Creating Flashcards

Another common use case is leveraging AI to convert personal notes into study flashcards or summaries for exam prep. Students in challenging CS subjects often spend hours making flashcards manually. On Reddit's r/study, one student shared that turning notes into flashcards by hand was *"hella time consuming,"* whereas using ChatGPT was *"such a time saver"* – taking **minutes instead of an hour** per topic <sup>3</sup>. This was especially helpful for topics they *"didn't understand in the lectures,"* as the AI could quickly summarize and simplify those areas <sup>4</sup>. They reported the approach to be *"SUPER useful"* for quizzes and exam review: the **AI-generated questions** were *"atomic and similar to how I'd write it,"* needing only minor tweaks <sup>5</sup>. Essentially, tools like ChatGPT served as a **personal study assistant** by automatically generating flashcards and practice questions, demonstrating strong student demand for AI in **study note consolidation** and **quiz preparation**.

## Debugging and Understanding Code

In hands-on programming courses (e.g. an OOP project or Data Structures assignment), students often struggle with debugging and grasping code logic. Many have turned to AI for help. One Reddit user, a Master's student, confessed they were *"so tempted to stick my code into ChatGPT and let it refactor and debug everything."* They recognized this might short-circuit the learning of debugging skills, yet compared it to using an IDE's assist features and noted *"GPT is probably going to be one of my main tools even after I get the degree"* <sup>6</sup>. This student saw AI assistance as a way to produce **"significantly better work in less time"** on programming assignments <sup>6</sup>. Similarly, other students have mentioned using AI when stuck on code: for instance, asking ChatGPT to explain a snippet or find a bug. These real-world anecdotes show a demand for AI-powered **coding tutors** that can **explain code, fix errors, and mentor students through programming challenges** in courses like OOP.

## AI-Generated Quizzes and Practice Exams

Students also report using AI to **generate practice quizzes** when studying for exams in technical courses. A great example comes from an MSc computer science student who described studying “pretty much all day, every day” yet *“still struggling to keep up with all the content.”* To reinforce his learning, he used spaced repetition techniques and had **ChatGPT create multiple-choice quizzes** from his notes <sup>7</sup>. *“It works surprisingly well,”* he noted, but also found it *“super frustrating—sometimes ChatGPT gets the answers wrong”* which forced him to double-check and correct the AI’s output <sup>8</sup>. This frustration was actually a testament to how much he relied on the tool; it even inspired him to consider building a better quiz generator app so he could upload notes and automatically get practice questions <sup>8</sup>. The response to his post showed he wasn’t alone: other students chimed in that they *“use GPTs so you press one button and it makes the questions”* for study sessions, though they caution that for math-heavy subjects the AI *“often gets it wrong”* and needs verification <sup>9</sup>. Another commenter mentioned using AI to generate custom math problems of varying difficulty to practice problem-solving <sup>10</sup>. These discussions highlight a genuine demand for AI tools that can **produce practice quizzes/exams, flashcards, and problems** on-demand, acting as a **personalized quizmaster** for students.

## Desire for Personalized AI Study Assistants

Across these examples, a recurring theme is students craving a **personalized AI study assistant** to support their learning in tough CS courses. Whether it’s summarizing confusing OOP lecture slides, generating flashcards for data structures, explaining a tricky code bug, or quizzing them before a midterm – real students are actively seeking or already using AI solutions for help. Notably, they often voice wishes for more **reliable, tailored tools**: e.g. an AI that doesn’t just give generic answers but understands *their* class notes and syllabus. The posts above illustrate that this isn’t just idle talk; students are actually experimenting with current AI (like ChatGPT) to fill these needs, even if imperfect. The fact that a student would consider building a custom quiz app because existing AI sometimes errs <sup>8</sup> shows how **strong the demand** is for better AI-powered educational tools. From **simplifying study material** <sup>1</sup> <sup>2</sup> to **creating practice questions** <sup>3</sup> <sup>5</sup> to **debugging code** <sup>6</sup>, the common use cases emerge clearly. Real-world forum threads on Reddit (and likely Quora and others) are filled with students saying, in effect, *“I need an AI to help me learn this stuff.”* These representative scenarios underscore that university students – especially in computer science – are actively looking for AI assistance to **understand coursework, prepare for quizzes, and get personalized help**, confirming a very real demand for AI-powered educational tools.

### Sources:

- Reddit – student asking for AI tools to study lecture slides <sup>1</sup> <sup>2</sup>
- Reddit – discussion on using ChatGPT to turn notes into flashcards for exams <sup>3</sup> <sup>5</sup>
- Reddit – CS student pondering ChatGPT for debugging and refactoring code <sup>6</sup>
- Reddit – engineering student using ChatGPT to generate quiz questions and others doing the same <sup>8</sup> <sup>9</sup>

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<sup>1</sup> <sup>2</sup> Need help studying lecture slides with AI – what tools or methods do you use? : r/WritingWithAI  
[https://www.reddit.com/r/WritingWithAI/comments/1mhw4l1/need\\_help\\_studying\\_lecture\\_slides\\_with\\_ai\\_what/](https://www.reddit.com/r/WritingWithAI/comments/1mhw4l1/need_help_studying_lecture_slides_with_ai_what/)

3 4 5 Anyone else using ChatGPT/AI to summarise notes/lecture slides and make flashcards? : r/study  
[https://www.reddit.com/r/study/comments/11o2r9t/anyone\\_else\\_using\\_chatgptai\\_to\\_summarise/](https://www.reddit.com/r/study/comments/11o2r9t/anyone_else_using_chatgptai_to_summarise/)

6 Question for Computer Science and Programming students: ChatGPT for troubleshooting code for college/university degrees : r/ChatGPT  
[https://www.reddit.com/r/ChatGPT/comments/17jeu06/question\\_for\\_computer\\_science\\_and\\_programming/](https://www.reddit.com/r/ChatGPT/comments/17jeu06/question_for_computer_science_and_programming/)

7 8 9 10 ChatGPT to notes into quizzes, am I the only one who studies this way? : r/EngineeringStudents  
[https://www.reddit.com/r/EngineeringStudents/comments/1h50qr5/chatgpt\\_to\\_notes\\_into\\_quizzes\\_am\\_i\\_the\\_only\\_one/](https://www.reddit.com/r/EngineeringStudents/comments/1h50qr5/chatgpt_to_notes_into_quizzes_am_i_the_only_one/)