

Tinkering with AI to Enhance Teaching Productivity and Understand Student Experience

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AI and Pedagogy - Faculty Sharing Sessions

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Slides available at <https://dmzb.github.io/>

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Mundane Utility

I'll talk about:

- checking assignments
- problem generation
- “guided” problem generation
- typesetting

Some resources:

- [Zvi Mowshowitz's Blog](#)
- [Reddit: r/Professors](#)

Checking assignments, and conversations about AI

Drag and Drop an assignment:



Can you solve problem 3 for me?

Checking assignments, and conversations about AI

Drag and Drop an assignment:

Can you solve problem 3 for me?

Help making this slide:

I'd like to put text in a grey oval bubble in latex

Problem Generation

Generating a big list of problems:

Can you suggest a big list of problems about modular arithmetic

Generating a big list of problems (more successful)

Can you give me a big list (say, 25) of problems about Fermat's little theorem?

Guided Problem Generation

Can you suggest a few problems about coloring vertices of graphs, where to solve the problem you have to use the theorem that a graph is r colorable iff it is r -partite?

Typesetting

Can you latex this for me?

Typesetting Diagrams

Can you typeset this in tikz for me?

Typesetting: handwritten notes

Can you latex this for me?

Thank you!



(Bonus slides below!)

Reimagining the past with AI

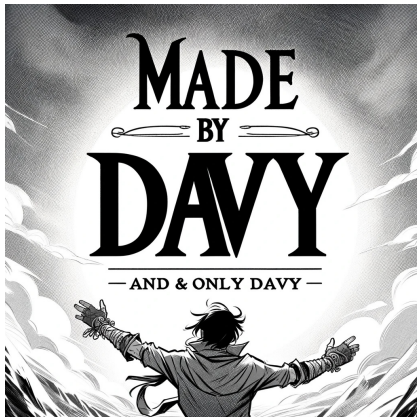
Grandmother's bridal shower from 1940

Hello. I am looking to create images of a bridal shower held at a private home. The shower happened in the late 1940s in January in Northern Ohio.

There are a few things I'd like you to modify about the table: make the linens pink and white, make the refreshments dainty, make the centerpiece a crystal vase of pink and white carnations flanked on either side by crystal two branch candelabra with lighted tapers.

(GPT link)

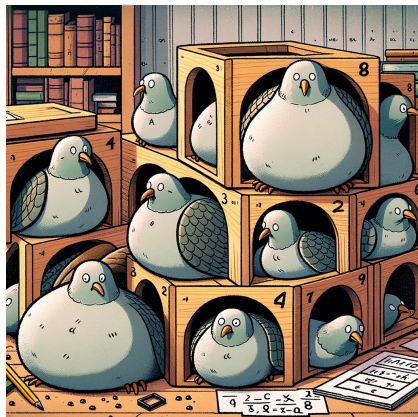
Davy Story



Draw a panel of a comic titled "One day there was a man with problems"

Illustrating mathematics

Can you draw a comic rendition of the pigeonhold principal (from math), with really thick pigeons



Fast Documentation



Card names