



U-Learn

How do U-Learn?



Hello!

We're the Dream Team

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Problem Space

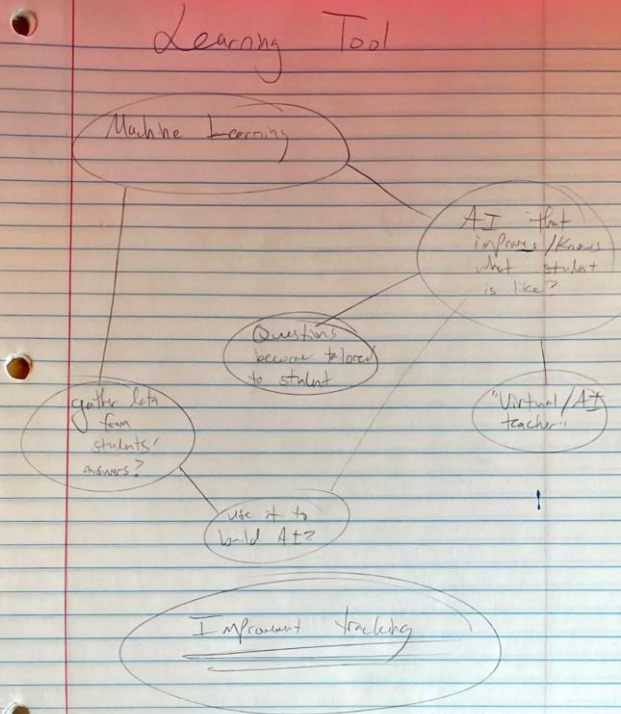
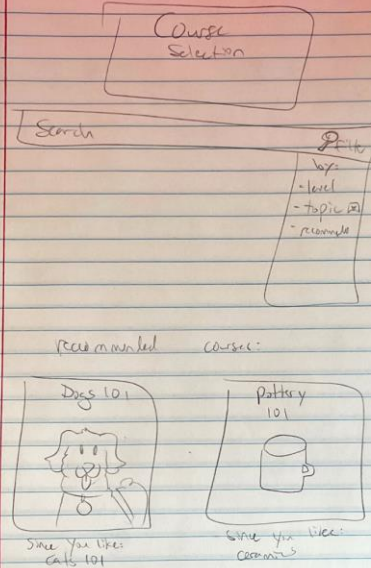
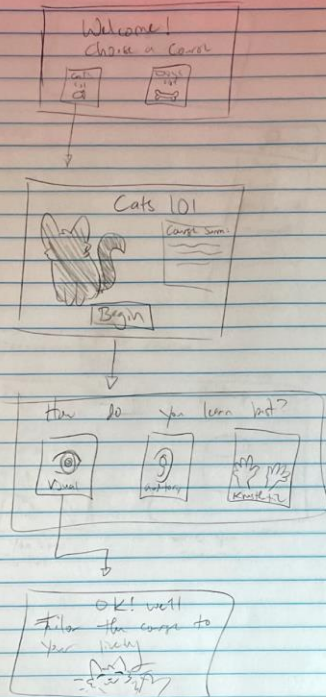
Our goal was to create a model that utilizes machine learning to help connect and educate people

Initial Ideas

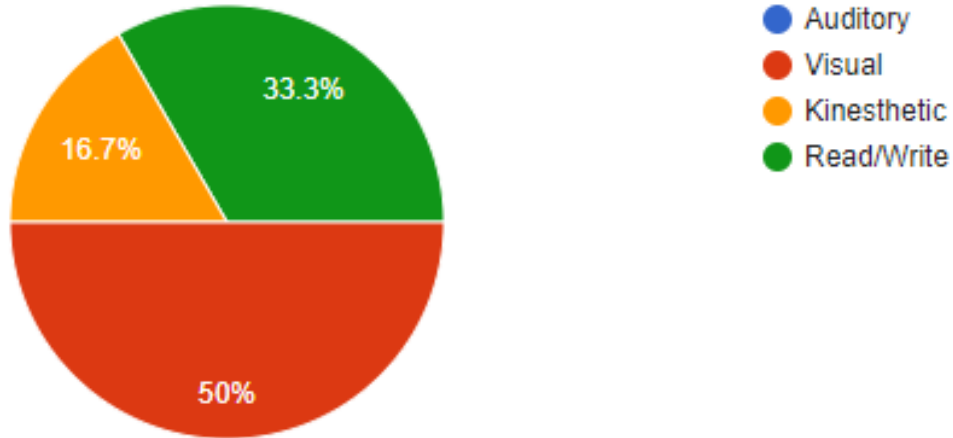


The beginnings of our
model

Paper Prototypes



What is the Way You Learn Best?



Key Features

- + Learning Type Assessment
- + Unique Course Selection
- + Machine Learning Model

The Machine Learning Process

- + Tailored to each and every student
- + Adjusts the course based on the student's understanding of specific concepts

Struggling
with a
particular
math
equation?
**No
problem.**



U-Learn will show
you content that
reinforces the
equation to
guarantee mastery
of the topic.

Final Prototype



After testing and revisions...

Before & After

Course Dashboard

Start a
new
course

Go ➤

Continue
current
course

Go ➤

Placement
Test

Go ➤

Learning type

Initial Prototype

Course Dashboard

Start a
new
course

Go ➤

Continue
current
course

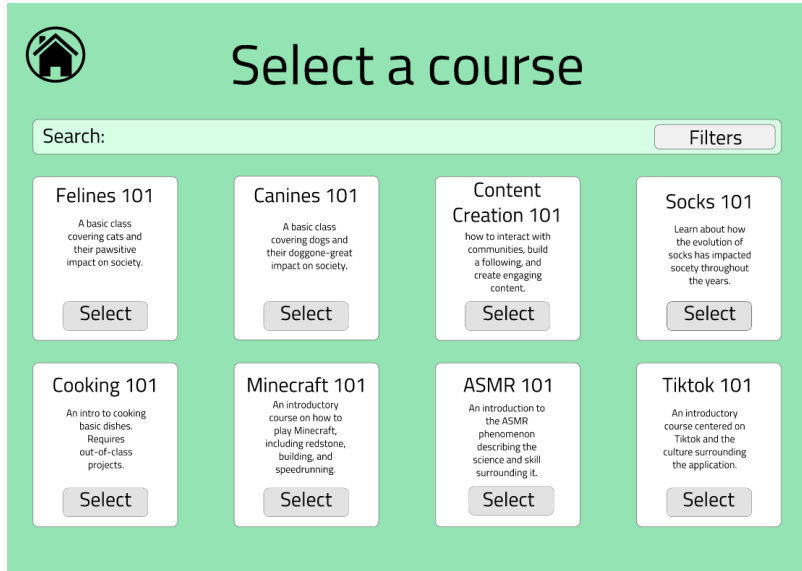
Go ➤

Learning
Type
Assessment

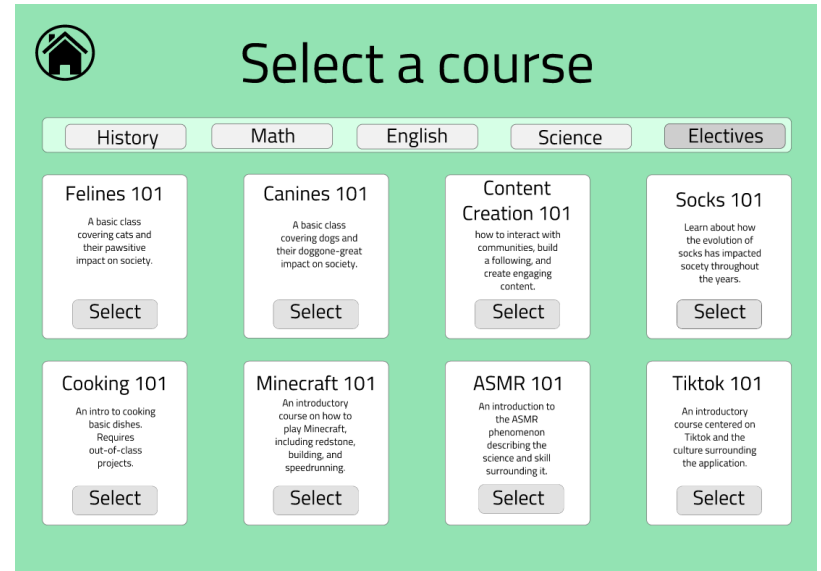
Go ➤

Final Prototype

Before & After



Initial Prototype

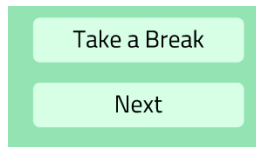


Final Prototype

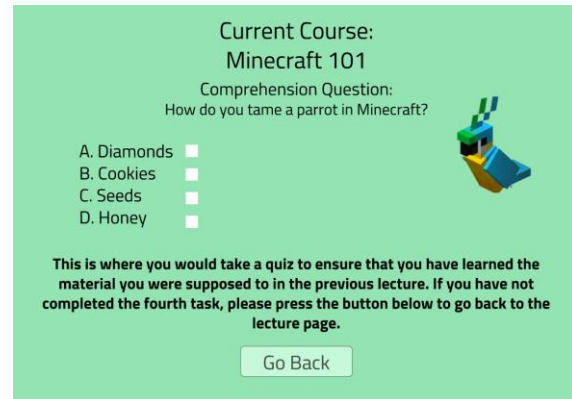
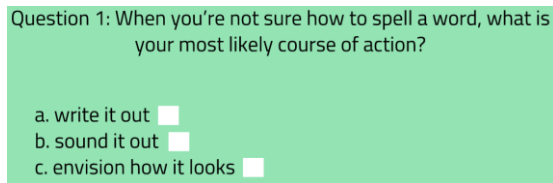
Revisions

+ Added course comprehension quiz

+ Altered buttons on current course tab



+ Added buttons for learning type assessment



Tasks

Task 1 - Logging in

Each user can create an account and login, after which they will be greeted by a course dashboard.

Task 2 - Learning Type Assessment

Questionnaire that determines a student's learning style; their course will change depending on the results.

Task 3 - Add Minecraft as a Course

There is an extensive catalogue of courses available for users to select.

Task 4 - Watching a Lecture

Lecture videos are available at the student's leisure, along with a space for note-taking.

The background is a solid green color. It is decorated with a repeating pattern of light green geometric shapes. These shapes include squares, circles, and crosses, all of which are slightly rotated and scattered across the entire surface. The word "Demo" is centered in the middle of the image in a white, sans-serif font.

Demo

Data Analysis



Results from Usability
Testing

First Round of Usability Testing

Time to Complete (Sec)	Task 1	Task 2	Task 3	Task 4
User 1	4.18	46.41	8.15	19.70
User 2	4.44	32.52	11.38	10.14
User 3	6.26	36.32	9.71	13.07

Quantitative Analysis

Task 1 Average
Time

4.96 seconds

Task 2 Average
Time

38.42 seconds

Task 3 Average
Time

9.75 seconds

Task 4 Average
Time

13.30 seconds

Second Round of Usability Testing

Time to Complete (Sec)	Task 1	Task 2	Task 3	Task 4
User 1	5.23	23.69	13.83	3.55
User 2	3.58	32.97	8.81	5.46
User 3	2.33	64.24	5.89	4.16

Quantitative Analysis

Task 1 Average
Time

3.71 seconds

Task 2 Average
Time

40.30 seconds

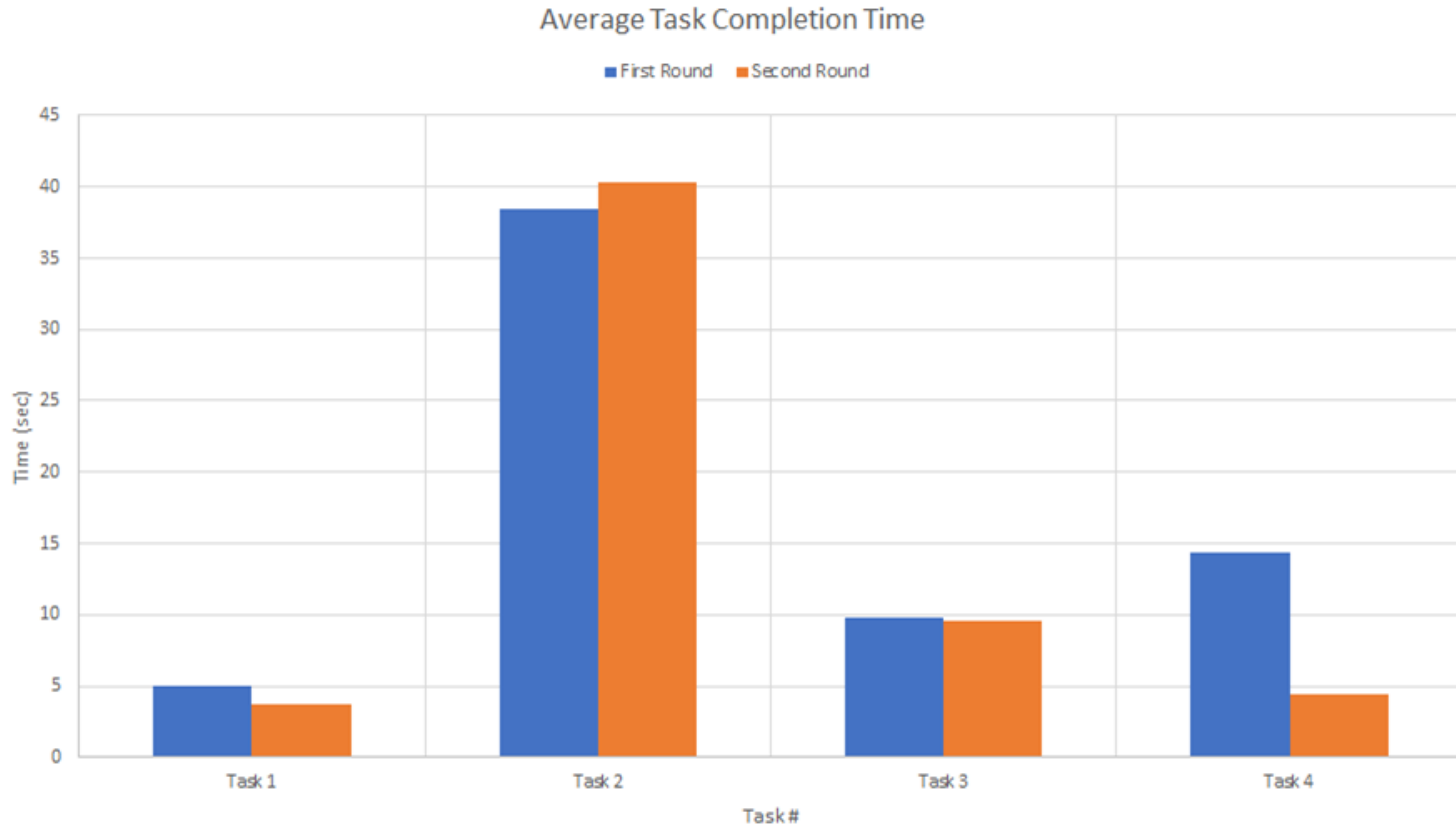
Task 3 Average
Time

9.51 seconds

Task 4 Average
Time

4.39 seconds

Quantitative Analysis



Significance

- + Given t-test values, most of our task revisions were **not** shown to be statistically significant
- + Only significant difference was task 4
 - + P-value: 0.03
- + **Task 4 completion time was faster!**

Qualitative Analysis

First Prototype

- + No task completion page
- + Users press “next” button to watch lecture

Final Prototype

- + Task completion pages
- + Users press “play” icon to watch lecture



OUR APPLICATION

U-Learn is primarily optimized for desktop devices

The Future of U- Learn



Reflections of the
Application