

Week 1: AI Foundations

Weekly summary

Was intimidated about what it meant to build within machine learning, but taking my time breaking down the readings and visualizing them in FigJam really helped!

The enterprise project took me 2 days, because I was getting acclimated in how to use V0 and Cursor, but that's finished! And learned a lot in the process!

There were items I wanted to complete: follow the Fast.AI Video 1.1 model instructions I took notes on, watch the Fast.AI Video 1.2, finalize the ML mind mapping, and build out the Cursor product design breakdown case study. But they will be categorized under "ON ICE" in Airtable and will be something I do on the side when I have time.

Overall feel 7/10 confident to start out Week 2!

Learnings

- Start BUILD assignments ASAP
- The end-to-end process of ML models
- When using Cursor I should specify every step of what the AI is doing. Over time the short-term memory of the AI will increase to 100% at which the AI will start to “forget” earlier parts of the conversation. Therefore it’s better to start a new conversation or be more specific with everything you tell it (so it’s good to already have the PRD file in the codebase to refer to)
- V0 is good for front-end, if you ask it to do back-end it’ll make you manually add in API keys
- Human-in-the-loop is important to make sure you know everything AI is doing
- You need to turn off your VPN when using Cursor
- When building something create an MVP

Challenges

- How to use V0 and Cursor
- Unsure of whether the AI Agent was actively taking my request. I had to ask the AI if it started the process yet and it said yes then showed in real-time everything it was doing
 - Cursor 3 dot small jump animation was way too small for me to see

Exciting things!

- Cool to have Cursor widget on my phone so I can physically do other things
- I think it's interesting how the front-end is built to reflect what's actively going on with the AI. Makes me want to work with more metric and real-time software products!

Design Thoughts

- Keeping User In The Loop
 - Motion signal activity - Animation is important for UI design of AI Agents. Especially telling the user when a certain action is being complete, there needs to be a loading animation.
 - Ex: The “thinking” parts were interesting, letting me know they’re processing my information before executing, want to research more about that
 - Real-time activity logs give confidence- Letting the user know exactly what’s going on helps demystify the “magic” of AI and give the user confidence the AI is working, by seeing it actively processing.
 - Notifications- The user has the freedom to move onto other tasks while the AI agent processes the user’s tasks
 - Frustration: At times I was unsure of whether the AI Agent was actively taking my request. Cursor 3 dot small jump animation was way too small for me to see. I had to ask the AI if it started the process yet and it said yes then showed in real-time everything it was doing
 - How UI state affects user understanding:
 - No motion + no context + long wait time = did not receive input
 - Motion + no context + long wait time= input received, but possibly stuck on something
 - Motion + consistent context + long wait time = input received, process naturally takes long
 - Agent performance-related metrics
 - Letting the user know certain metrics that could influence the user experience (i.e. 88% of context used).

Motion + Real Time Activity Logs

The plus and minus metrics are additions and removals of lines of code made by the AI. Typical developer metrics a developer would find useful to summarize the progress of AI through the codebase.

Loading Animation 1

Individual file creation

```
text elements and some test logic. Let's start with the first one.  
✖ QualitySettingsPanel.simple.test.ts  
  
The model provided an ambiguous search result.  
✖ QualitySettingsPanel.simple.test.ts
```

Loading Animation 2

Thinking about next batch actions

```
is defaulting to cellular quality. Let's make it match the actual behavior:  
✖ TS ...ility-manager.simple.test.ts +2  
  
✖ TS ...ility-manager.simple.test.ts +2  
  
...
```

Loading Animation 3

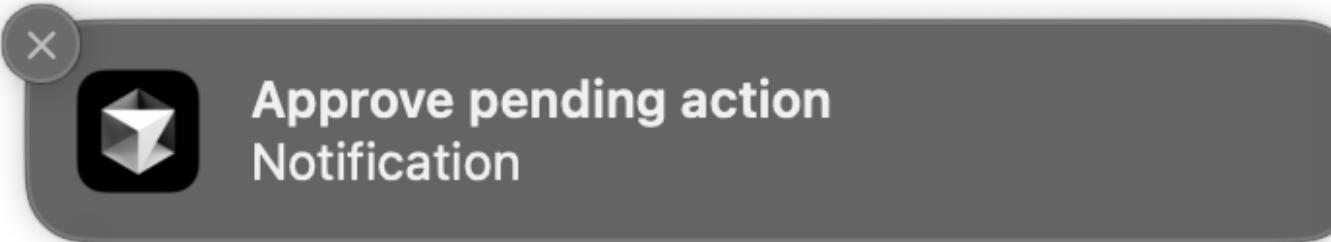
Testing in progress

```
Now let me run the tests to make sure the error handling and logging system are working correctly:  
  
npm test --  
--testPathPattern="error-handling.*error-handler.simple.test"  
  
Open in Terminal ⌂ Skip
```

Notifications

Initial notification

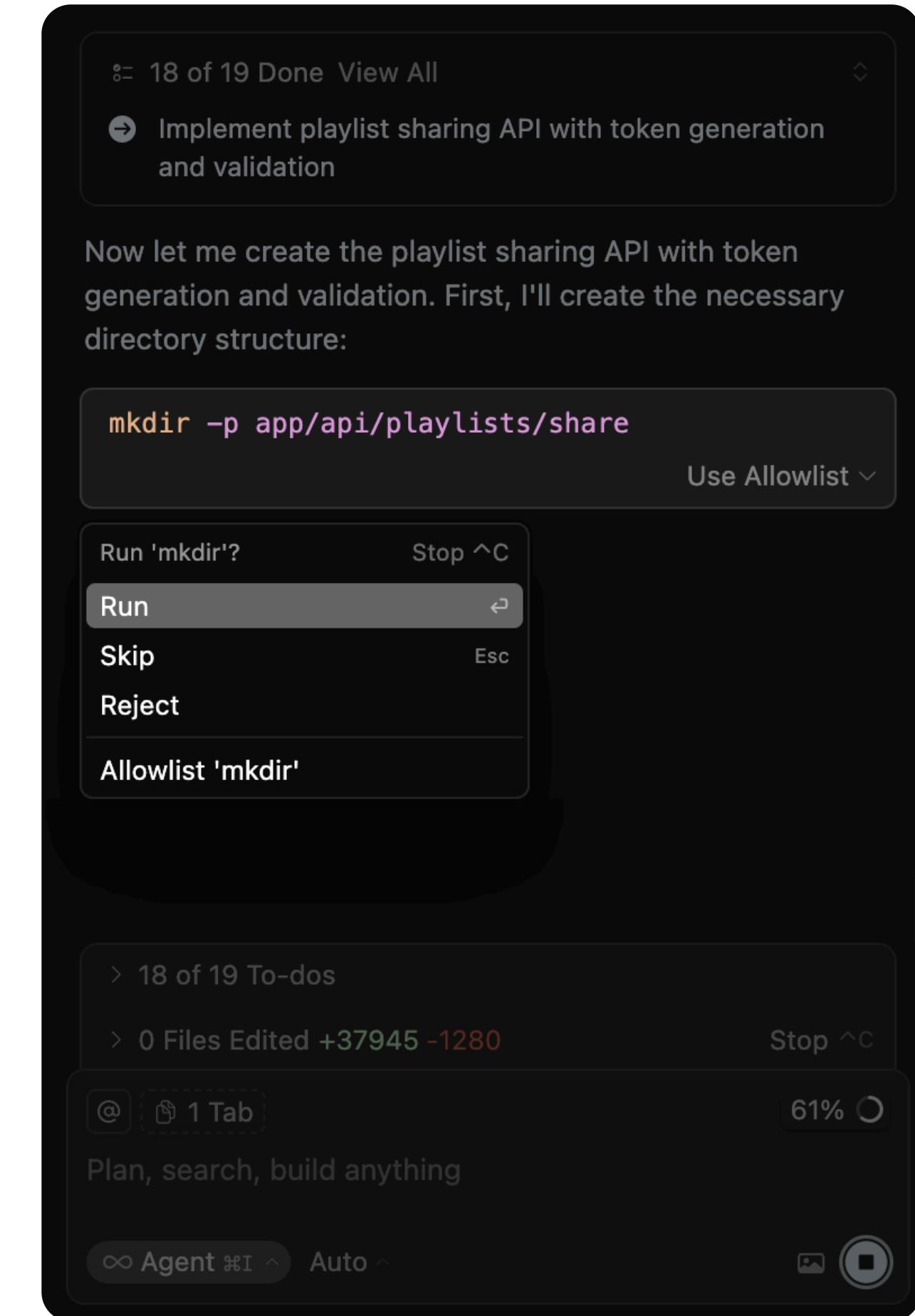
User is in the middle of another task whe Cursor notifies the user the agent is asking the user for action approval



The other typical user interactions i.e. typing input, agent mode selection, viewing context percentage, etc. is not available until the user selects an option so the AI can continue with the task

User Selection

User reads the task that needs approval and selects an option



Adding to Playbook

- Rough draft of my end-to-end understanding of creating ML models
- WIP Table instructions to create my own models in Jupyter (Fast.ai video 1.1)
- MVP of enterprise application
- How to create a full-stack application with V0 and Cursor
- Glossary

Later additions:

- Cursor product breakdown
- Need to watch Fast.ai video 1.2