PROMPTING AI

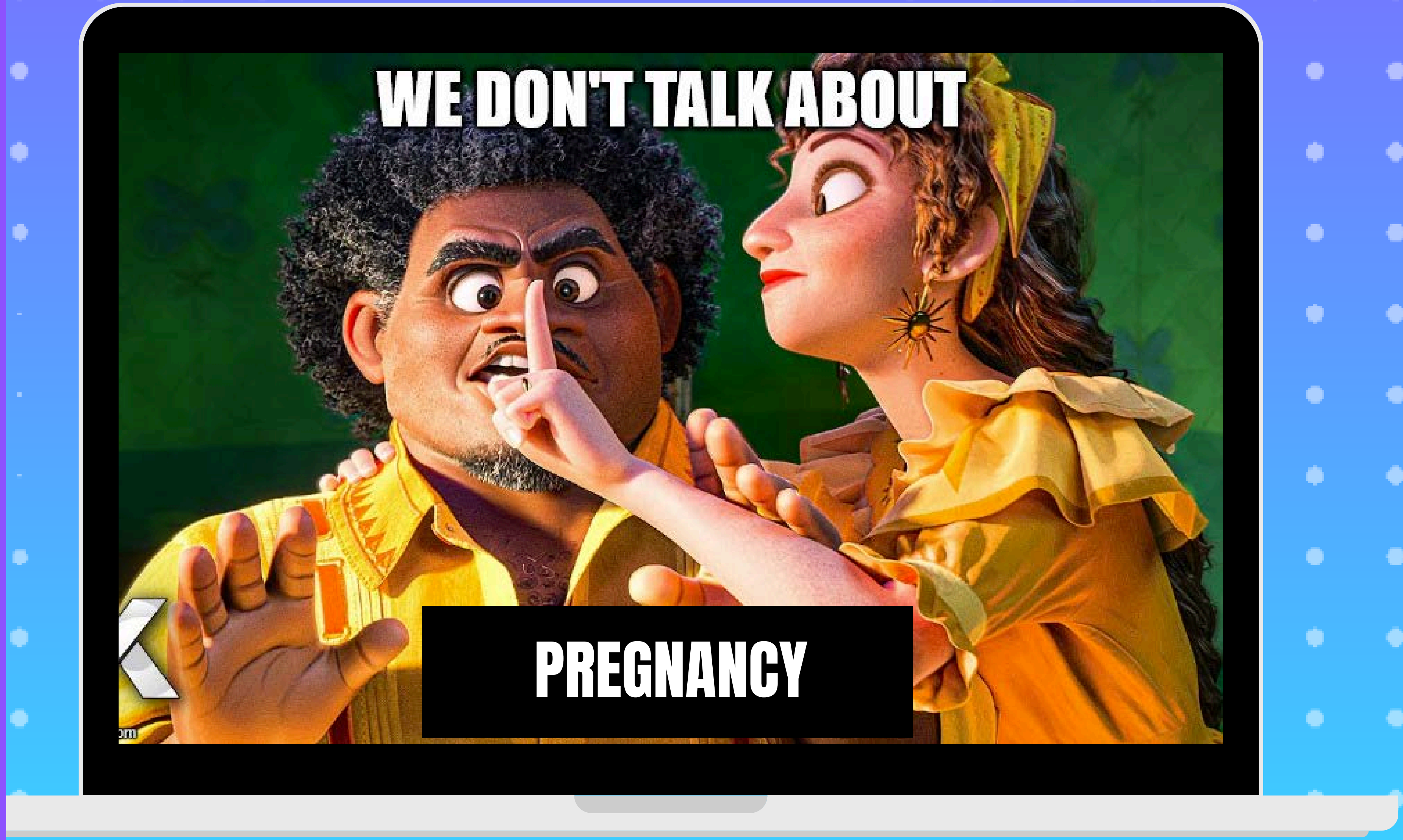
TO BUILD A PREGNANCY APP I CAN TRUST

TABOO

We don’t talk enough about pregnancy in the workplace.

LACK OF DISCUSSION

- Poor maternity leave policies
- Overworked expecting moms
- Privacy-Invasive Pregnancy Apps



HI, MY NAME IS RIZEL

- Staff Developer Advocate at Block
- Passionate about Open Source and AI
- 35 weeks pregnant

AGENDA

- LACK OF DATA PRIVACY ONLINE
- DECENTRALIZED WEB NODES
- AI AGENTS
- TIPS AND TRICKS
- DEMO
- RESOURCES

THE PRIVACY PROBLEM

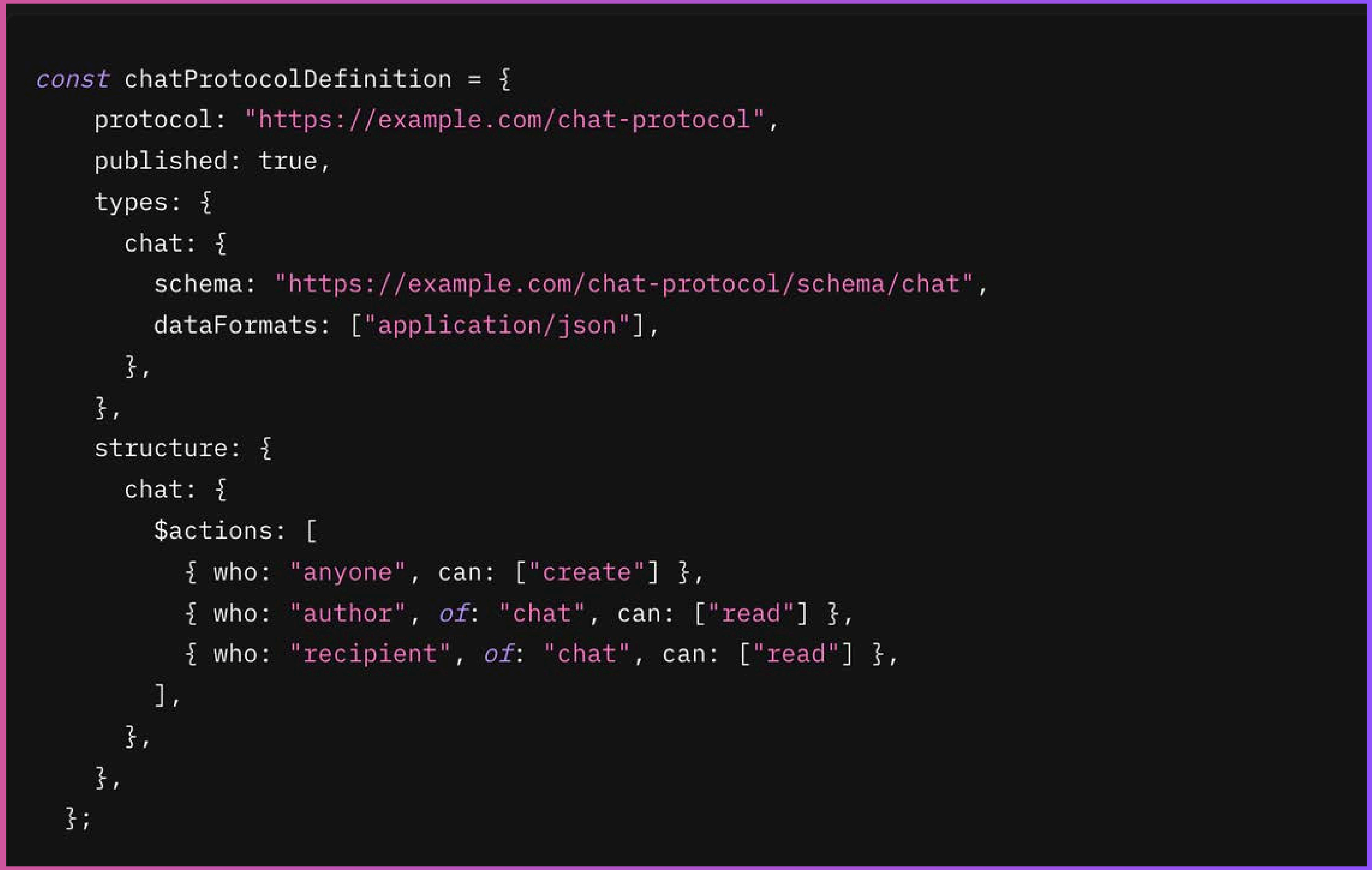
- Apps collect massive amounts of personal data
- "That's just how it is"
- Who should really own your data?

INTRODUCING DWNS

- Decentralized Web Nodes
- Personal Data Storage Mechanism
- Open Source
- Encrypted Personal Dropbox
- User-owned and controlled

HOW DOES IT WORK?

- DWNs use Protocol-Based Access Control



```
const chatProtocolDefinition = {
    protocol: "https://example.com/chat-protocol",
    published: true,
    types: {
      chat: {
        schema: "https://example.com/chat-protocol/schema/chat",
        dataFormats: ["application/json"],
      },
    },
    structure: {
      chat: {
        $actions: [
          { who: "anyone", can: ["create"] },
          { who: "author", of: "chat", can: ["read"] },
          { who: "recipient", of: "chat", can: ["read"] },
        ],
      },
    },
  };
```

IDEA

Can I use AI to help me build an app where I own pregnancy data?

INTRODUCING GOOSE

- A developer agent local to your machine
- Available in your terminal Also available in your IDE (Visual Studio Code, Intellij)
- Open source

WHAT GOOSE IS NOT

Goose is not an LLM.

WHAT ARE LLMS?

- LLM (Large Language Model)
- Trained on large amounts of data and use prediction algos to:
    - generate
    - summarize
    - translate
    - analyze

YOUR LLM EXPERIENCE

- You most likely interact with LLMs like:
    - gpt-4o
    - Sonnet
    - Gemini
- Through:
    - ChatGPT
    - Claude/Anthropic
    - GitHub Copilot
    - Google
    - Midjourney

WHAT ARE AGENTS

- Software that can execute operations without human intervention.
- Agents can decide what actions need to be made to reach a goal
- And take action to reach a goal

SO GOOSE IS...

Goose is a semi-autonomous agent

AGENTS VS. AUTOMATION

- Agents:
  - are given goals to achieve
  - learn, adapt, and make decisions to achieve goals
- Automation:
  - given a situation and responds with a predetermined action if the situation matches one of its recipes

HOW GOOSE WORKS

- Bring your own LLM for Goose to connect to
- You prompt Goose
- Goose asks the LLM to help make a plan
- Goose communicates the plan to you
- Goose executes the plan through shell commands

HANDLING ERRORS

- Goose runs a shell command and encounters an error:
  - Asks LLM for updated plan
  - Tell you if commands run too long
  - Tell you if you need to run a command because it needs elevated permissions

DEMOS WILL NOT BE PERFECT

AI is non-deterministic.

LET'S TRY IT OUT!

- Create a real-time collaborative drawing web application

DEMO

- Create a pregnancy due date calculator for me

RESOURCES

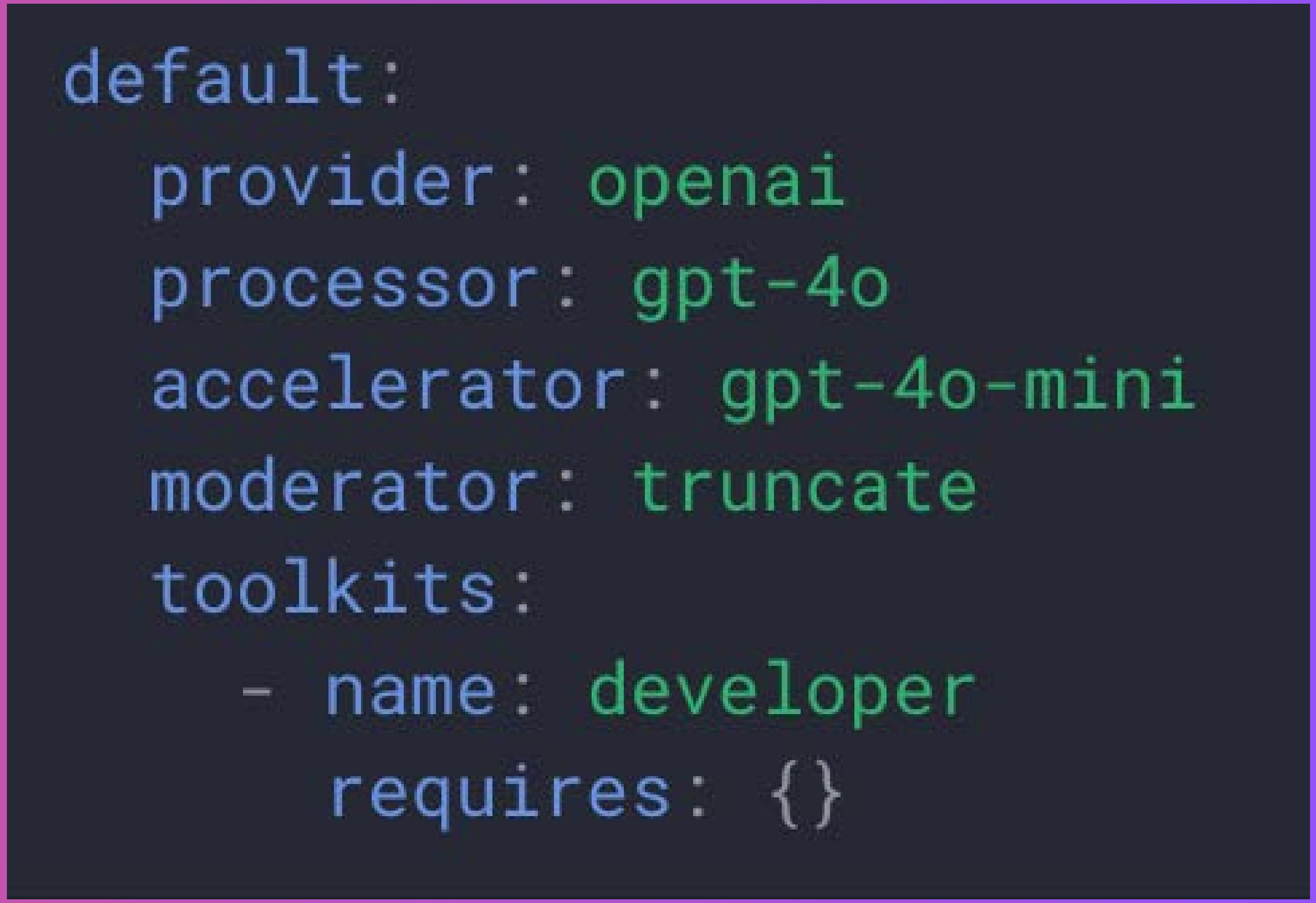
- Repo: github.com/block/goose
- Documentation: block.github.io/goose/

YOUR PROFILE

- Your profile is like your settings for how you want to interact with Goose.
- Default profile
  - ~/.config/goose/profiles.yaml

PROFILE FIELDS DEFINED

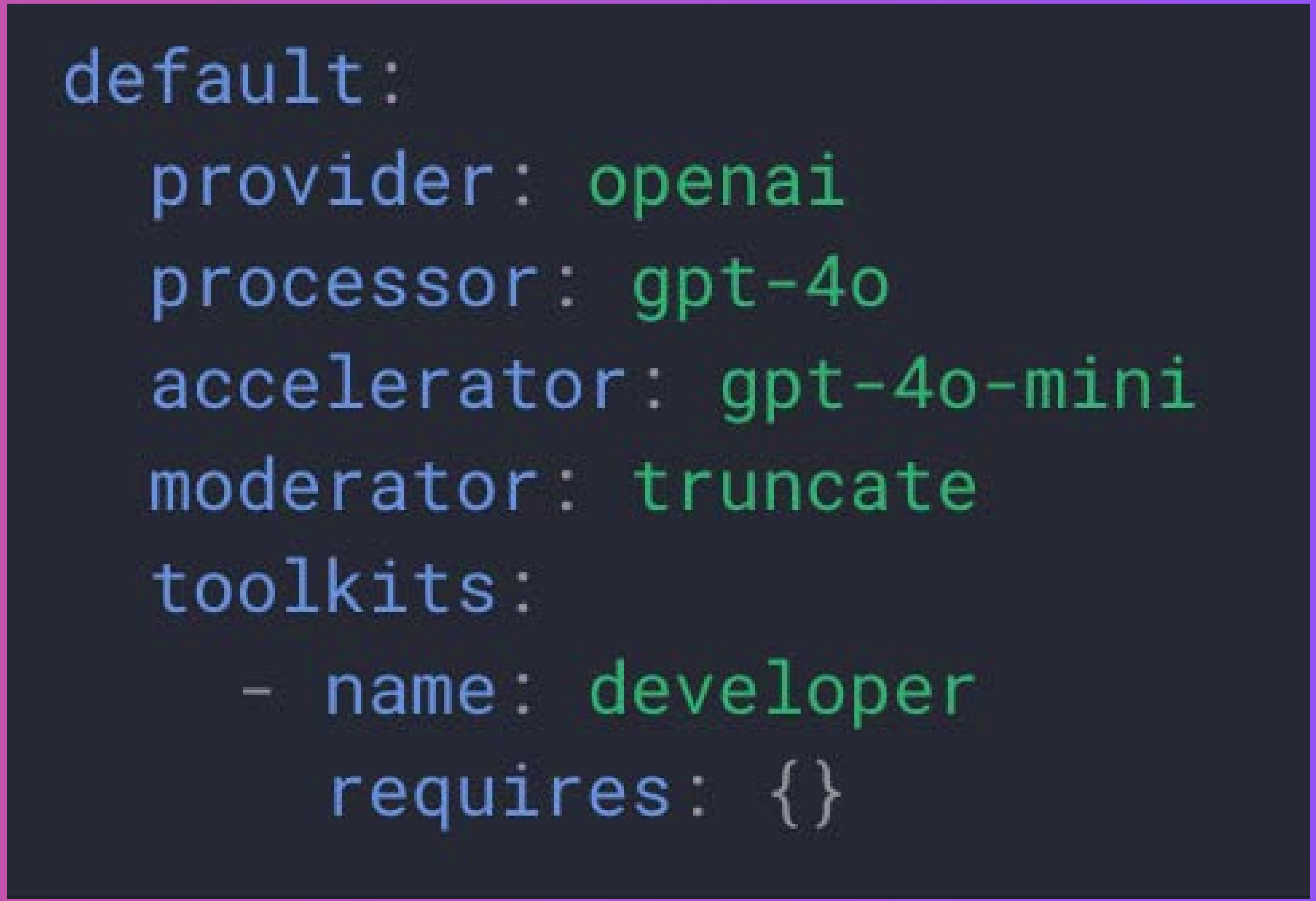
- Provider:
  - Which LLM service to use (openai, anthropic, etc.)
  - Where Goose will send requests for AI responses



```yaml
default:
  provider: openai
  processor: gpt-4o
  accelerator: gpt-4o-mini
  moderator: truncate
  toolkits:
    - name: developer
      requires: {}
```

PROFILE FIELDS DEFINED

- Processor:
  - Main model used for complex tasks
  - so we’ll have it use the bigger, heavier model for main tasks



```
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  provider: openai
  processor: gpt-4o
  accelerator: gpt-4o-mini
  moderator: truncate
  toolkits:
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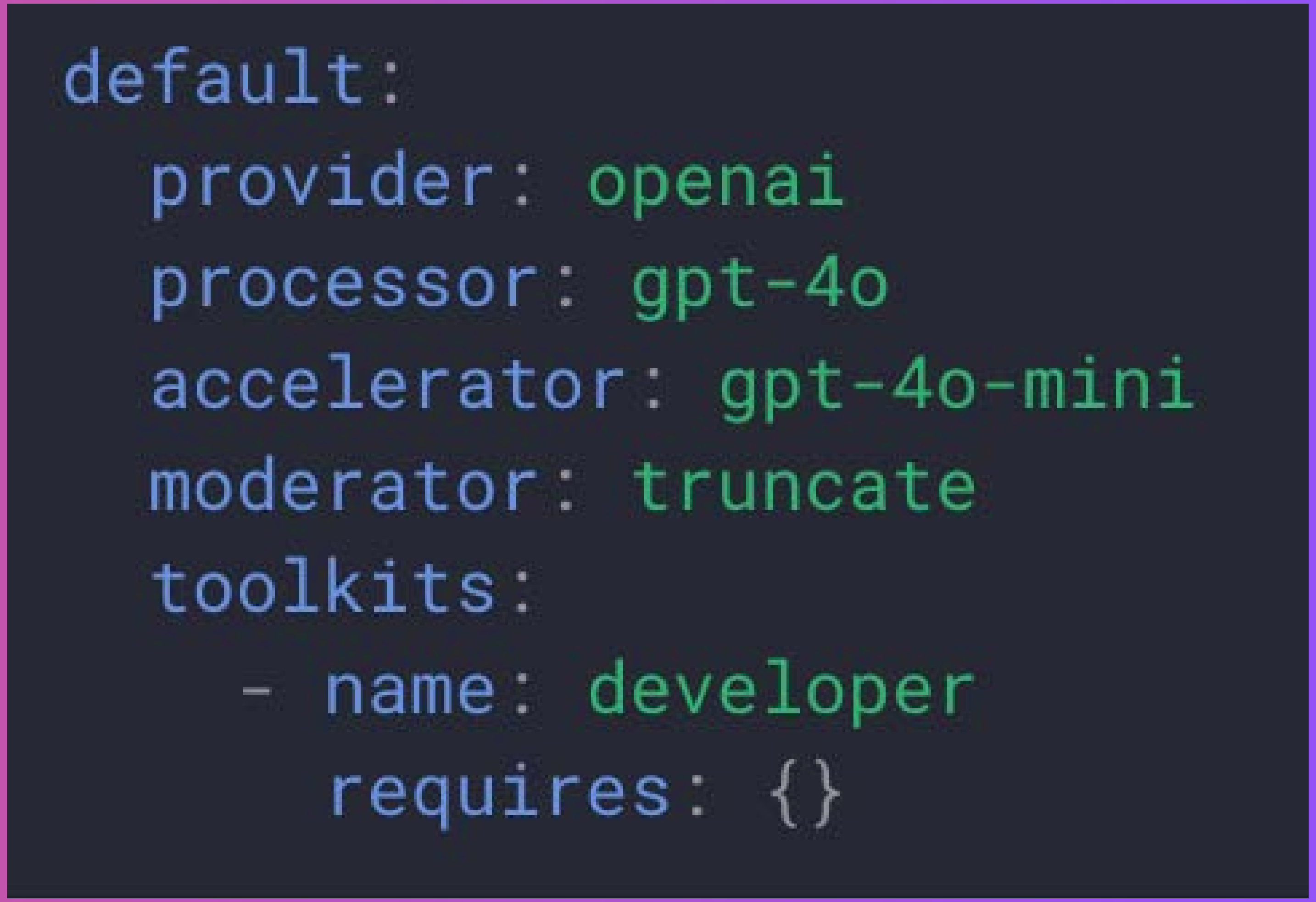
      requires: {}
```

PROFILE FIELDS DEFINED

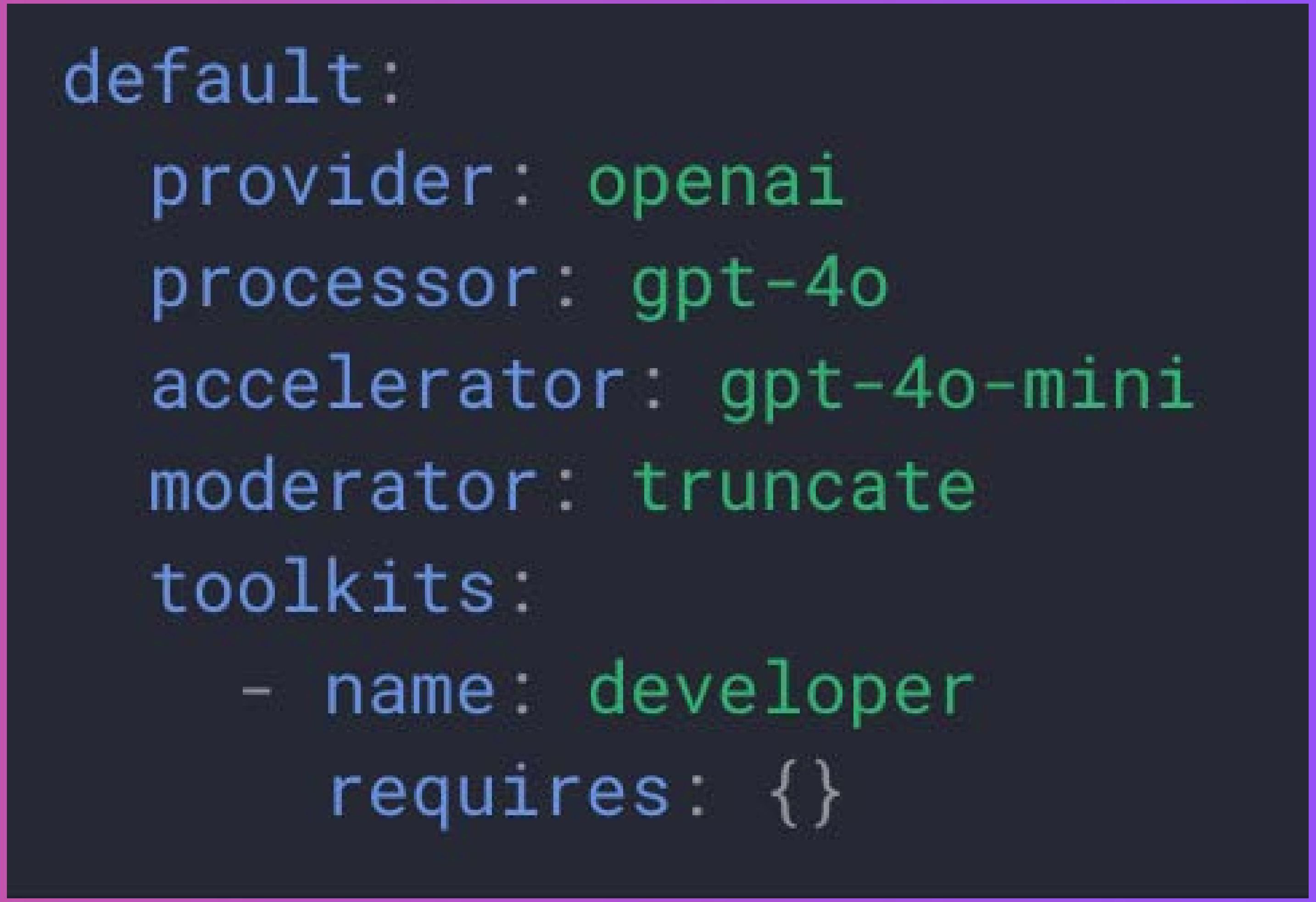
- Accelerator:
  - Lightweight model
  - Goose may choose the mini model when it has a quick, effcient task to complete



```
default:
  provider: openai
  processor: gpt-4o
  accelerator: gpt-4o-mini
  moderator: truncate
  toolkits:
    - name: developer
      requires: {}
```

PROFILE FIELDS DEFINED

- Moderator:
  - Passive means let the LLM have a long response
  - Truncate means response from LLM is too long, cut it.
  - $$$$$



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```

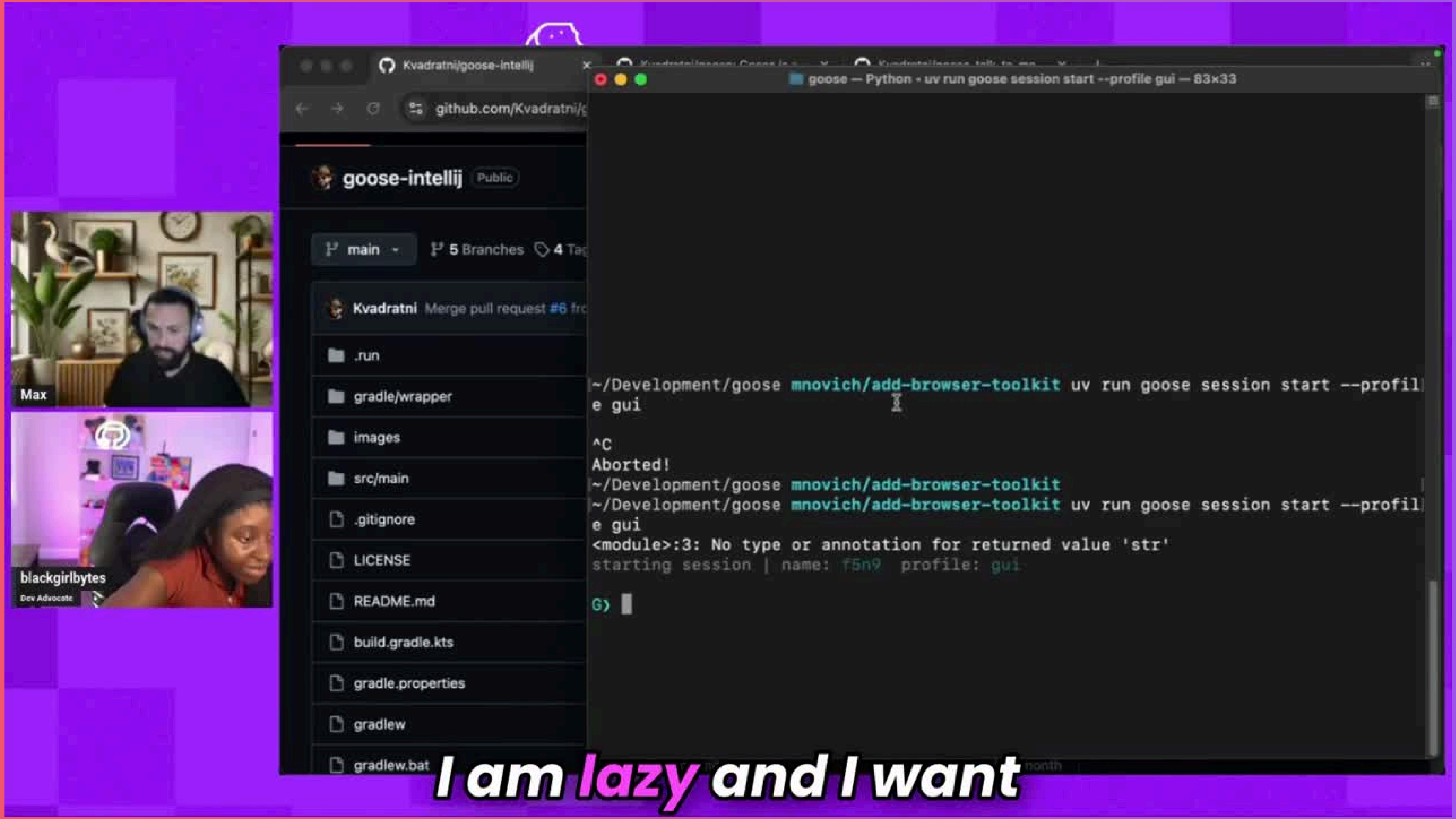
TOOLKITS

- Functions that can extend Goose’s capabilities.
- goose toolkits list
- developer = Goose read and write files, run shell commands
- screen toolkit = Goose take and analyze screenshots
- GitHub = Goose interacts with GitHub

TRY THE SCREEN TOOLKIT

- Add to profile
- Start new session
- Prompt: "take a screen shot of my display (1)"
- Open screenshot

OTHER TOOLKITS IN ACTION



```
~/Development/goose mnovich/add-browser-toolkit uv run goose session start --profil
e gui

^C
Aborted!
~/Development/goose mnovich/add-browser-toolkit
~/Development/goose mnovich/add-browser-toolkit uv run goose session start --profil
e gui
<module>:3: No type or annotation for returned value 'str'
starting session | name: f5n9  profile: gui

G> 
```

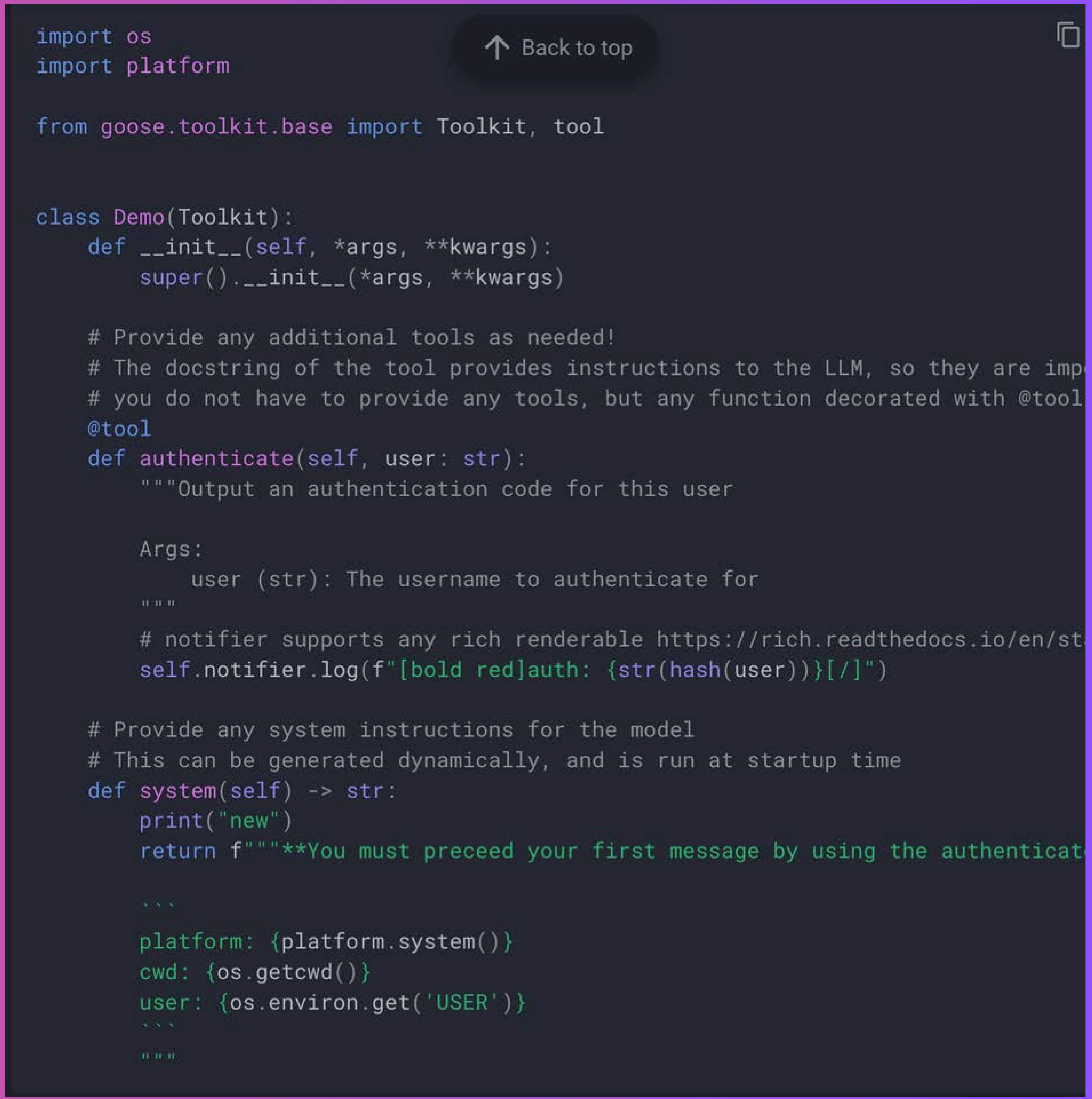
I am lazy and I want

MANAGING PROFILES

- You can have more than one profile
    - Default profile
    - Work profile
    - Side project profile
    - Demo profile

CREATING TOOLKITS

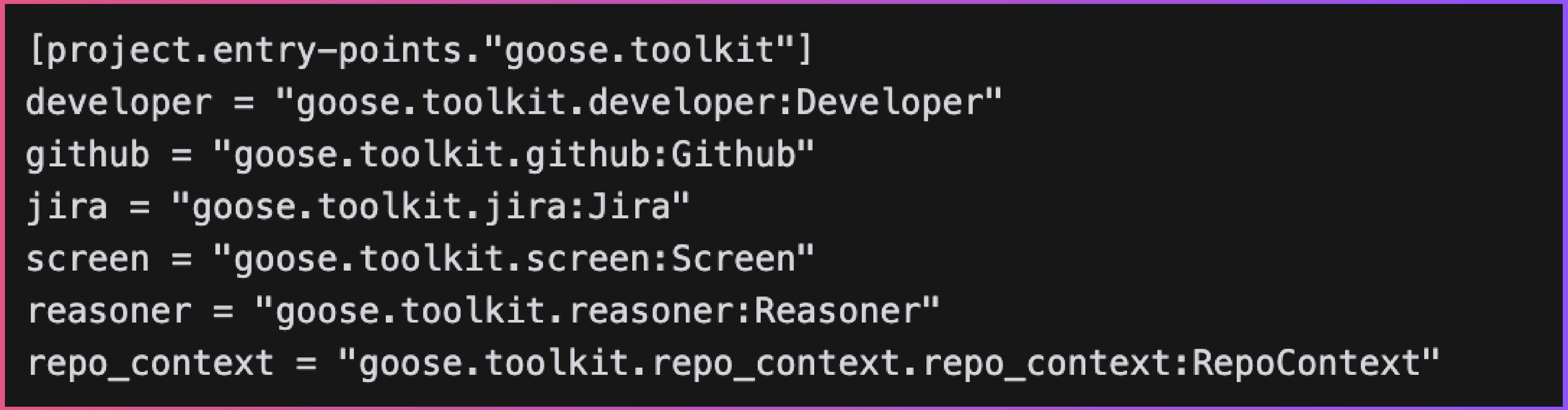
- Go into development mode
- uv run goose session start
- Create a class for toolkits
- Add to pyproject.toml



```python
import os
import platform

from goose.toolkit.base import Toolkit, tool


class Demo(Toolkit):
    def __init__(self, *args, **kwargs):
        super().__init__(*args, **kwargs)

    # Provide any additional tools as needed!
    # The docstring of the tool provides instructions to the LLM, so they are imp
    # you do not have to provide any tools, but any function decorated with @tool
    @tool
    def authenticate(self, user: str):
        """Output an authentication code for this user

        Args:
            user (str): The username to authenticate for
        """
        # notifier supports any rich renderable https://rich.readthedocs.io/en/st
        self.notifier.log(f"[bold red]auth: {str(hash(user))}[/]")

    # Provide any system instructions for the model
    # This can be generated dynamically, and is run at startup time
    def system(self) -> str:
        print("new")
        return f"""**You must preceed your first message by using the authenticat

        ```
        platform: {platform.system()}
        cwd: {os.getcwd()}
        user: {os.environ.get('USER')}
        ```
        """
```

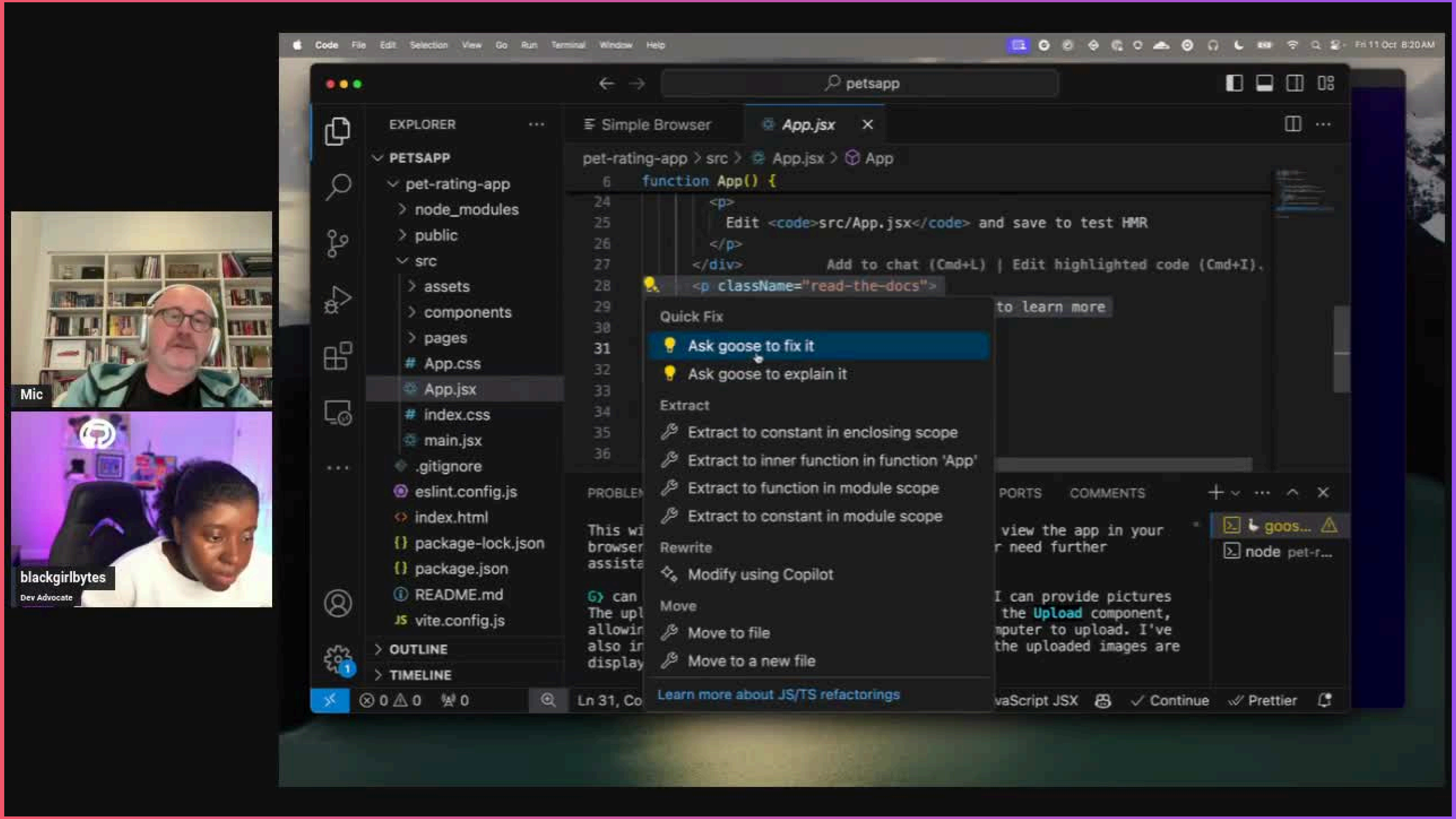
CREATING TOOLKITS

- Go into development mode
- uv run goose session start
- Create a class for toolkits
- Add to pyproject.toml



```
[project.entry-points."goose.toolkit"]
developer = "goose.toolkit.developer:Developer"
github = "goose.toolkit.github:Github"
jira = "goose.toolkit.jira:Jira"
screen = "goose.toolkit.screen:Screen"
reasoner = "goose.toolkit.reasoner:Reasoner"
repo_context = "goose.toolkit.repo_context.repo_context:RepoContext"
```

OTHER TOOLS: VS CODE



```
function App() {
      <p>
        Edit <code>src/App.jsx</code> and save to test HMR
      </p>
    </div>          Add to chat (Cmd+L) | Edit highlighted code (Cmd+I).
    <p className="read-the-docs">
                                   to learn more
```

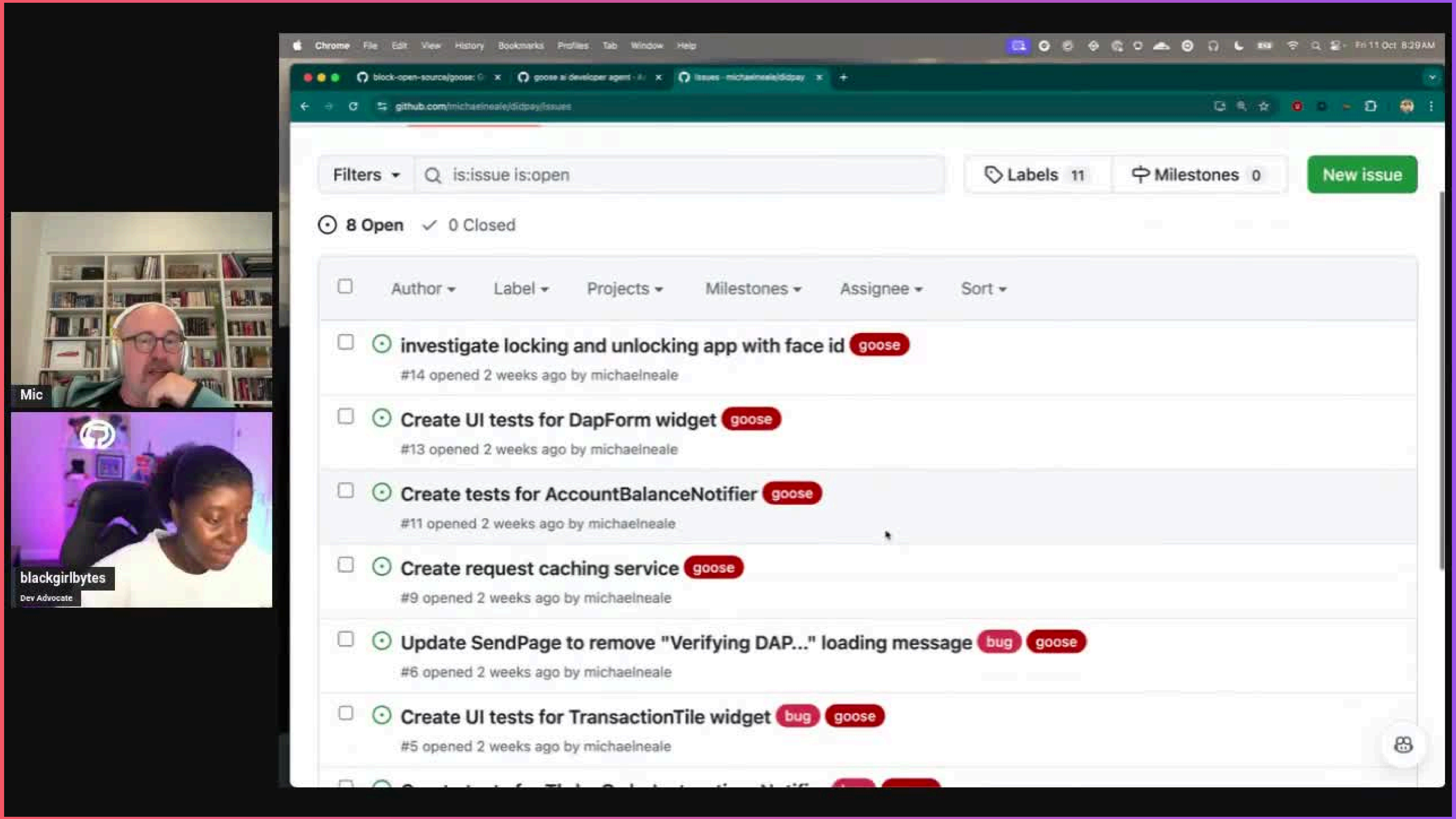
```
This wi                                   view the app in your
browser                                   r need further
assista

G> can                                    I can provide pictures
The upl                                   the Upload component,
allowin                                   mputer to upload. I've
also in                                   the uploaded images are
display
```

OTHER TOOLS: VS CODE

https://github.com/square/goose-vscode

=

OTHER TOOLS: GITHUB ACTION



is:issue is:open

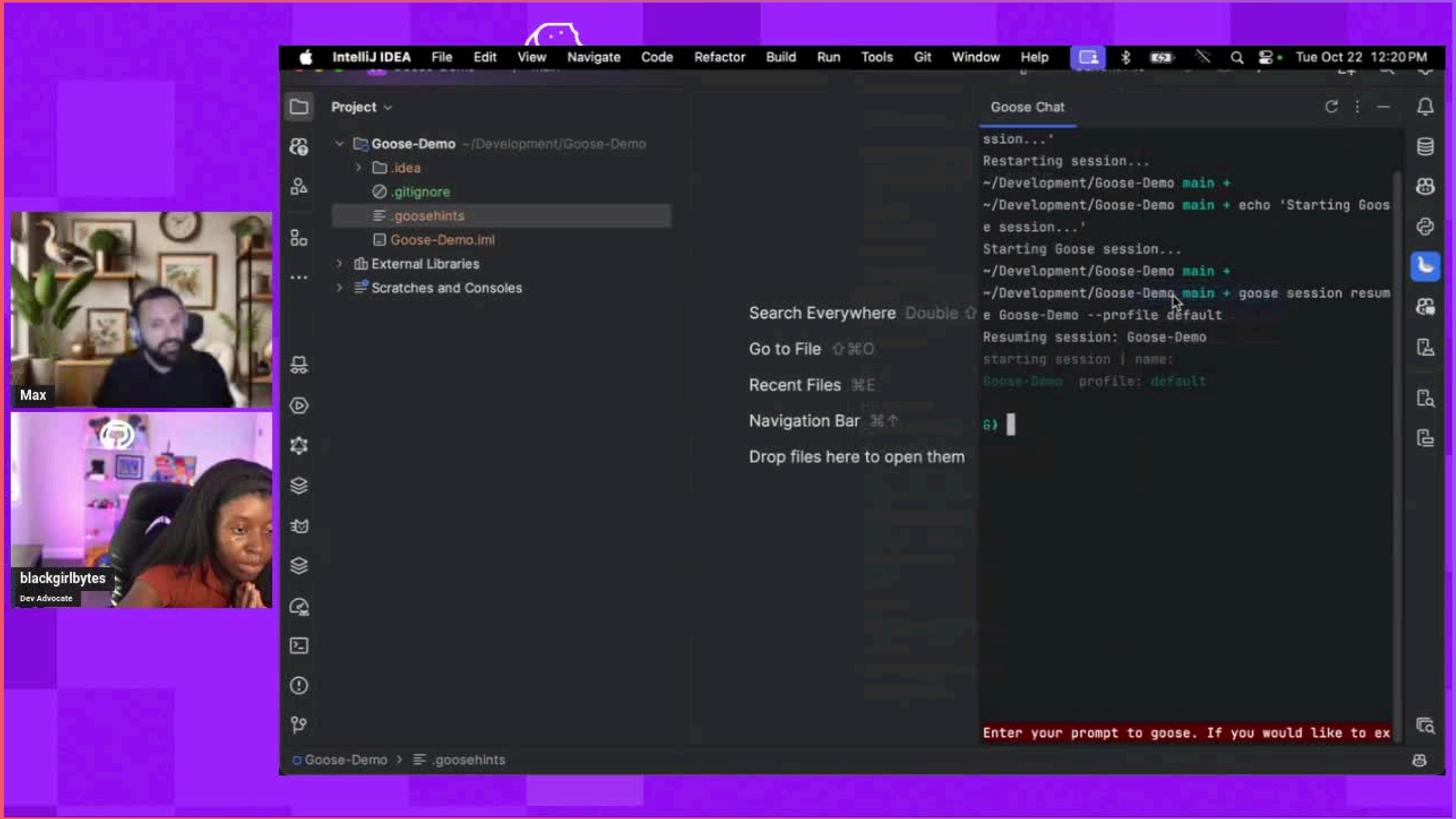
8 Open ✓ 0 Closed

- □ investigate locking and unlocking app with face id `goose`
  #14 opened 2 weeks ago by michaelneale
- □ Create UI tests for DapForm widget `goose`
  #13 opened 2 weeks ago by michaelneale
- □ Create tests for AccountBalanceNotifier `goose`
  #11 opened 2 weeks ago by michaelneale
- □ Create request caching service `goose`
  #9 opened 2 weeks ago by michaelneale
- □ Update SendPage to remove "Verifying DAP..." loading message `bug` `goose`
  #6 opened 2 weeks ago by michaelneale
- □ Create UI tests for TransactionTile widget `bug` `goose`
  #5 opened 2 weeks ago by michaelneale

OTHER TOOLS: GITHUB ACTION

https://github.com/marketplace/actions/goose-ai-developer-agent

OTHER TOOLS: INTELLIJ

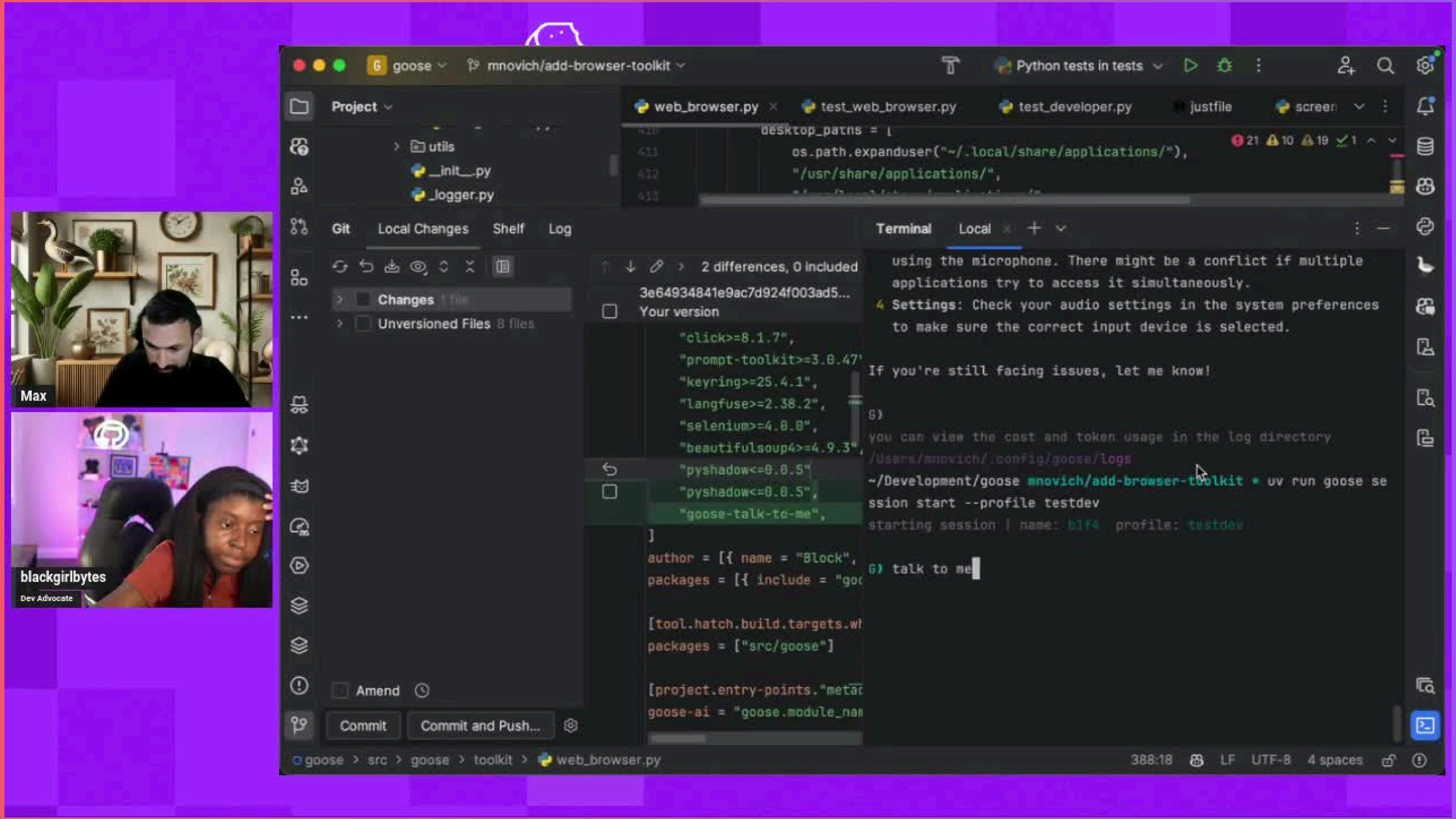


```
ssion...'
Restarting session...
~/Development/Goose-Demo main +
~/Development/Goose-Demo main + echo 'Starting Goos
e session...'
Starting Goose session...
~/Development/Goose-Demo main +
~/Development/Goose-Demo main + goose session resum
e Goose-Demo --profile default
Resuming session: Goose-Demo
starting session | name:
Goose-Demo  profile: default

G) 

Enter your prompt to goose. If you would like to ex
```

OTHER TOOLS: INTELLIJ

https://github.com/Kvadratni/goose-intellij

OTHER TOOLS: TALK TO ME



```
desktop_paths = [
    os.path.expanduser("~/.local/share/applications/"),
    "/usr/share/applications/",
```

2 differences, 0 included

3e64934841e9ac7d924f003ad5...

Your version

```
    "click>=8.1.7",
    "prompt-toolkit>=3.0.47",
    "keyring>=25.4.1",
    "langfuse>=2.38.2",
    "selenium>=4.0.0",
    "beautifulsoup4>=4.9.3",
    "pyshadow<=0.0.5"
    "pyshadow<=0.0.5",
    "goose-talk-to-me",
]
author = [{ name = "Block",
packages = [{ include = "goo

[tool.hatch.build.targets.wh
packages = ["src/goose"]

[project.entry-points."metad
goose-ai = "goose.module_nam
```

```
   using the microphone. There might be a conflict if multiple
   applications try to access it simultaneously.
 4 Settings: Check your audio settings in the system preferences
   to make sure the correct input device is selected.

If you're still facing issues, let me know!


G❯
you can view the cost and token usage in the log directory
/Users/mnovich/.config/goose/logs
~/Development/goose mnovich/add-browser-toolkit * uv run goose se
ssion start --profile testdev
starting session | name: b1f4  profile: testdev

G❯ talk to me
```

OTHER TOOLS: TALK TO ME

https://github.com/Kvadratni/goose-talk-to-me