

IDE Agents

An opinionated guide to AI coding in 2025



Silas Alberti

Founding Team @ Cognition
Prev: Stanford PhD Student

 Windsurf

 Devin

Agenda

1. Overview of the AI tooling landscape
2. Synchronous vs. asynchronous tools
3. The 2025 coding workflow
 - When to hand-off from sync to async?
 - How to combine tools like Devin & Windsurf
4. Where are we headed?

Three Eras of AI Coding Tools

Local Development ⇒ Collaborative Cloud Agents

1

GitHub Copilot: speed up coding

Code Completion

```
> print Greeting
```

```
1 def greet:
2   # Print a greeting
3   print()
```

2

AI IDEs: single-player task completion

IDE Automation

```
import express;
import CarService.'CarService';
```

```
class CarController extends
  carService() {
  constructor: extends (C
  );
```

```
Refactor to suggested class...
async handleGetCar(req, res)
try {
  car.Eid = req.params;
  console.log('CarController
  handleGetCar');
```

Refactor Class Dialog

Refactor CarController

Destination file:

controllers/CarController.js

New class name:

CarController

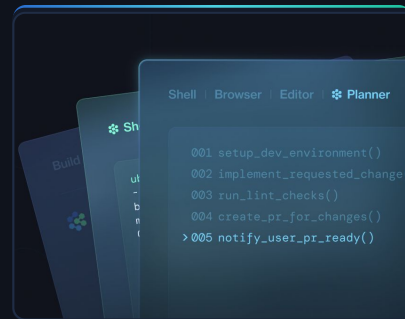
Cancel

Refactor

3

AI agents: scale workflows in parallel

AI Software Engineer



Three Eras of AI Coding Tools

Local Development \Rightarrow Collaborative Cloud Agents

1 ~10% efficiency gain

GitHub Copilot: speed up coding

Code Completion

```
> print Greeting
```

```
1 def greet:
2   # Print a greeting
3   print()
```

2 ~20% efficiency gain

AI IDEs: single-player task completion

IDE Automation

```
import express;
import CarService.'CarService';
```

```
class CarController extends
  carService() {
  constructor: extends (C
);
```

```
Refactor to suggested class...
async handleGetCar(req, res)
try {
  car.Eid = req.params;
  console CarController
```

Refactor Class Dialog

Refactor CarController

Destination file:
controllers/CarController.js

New class name:

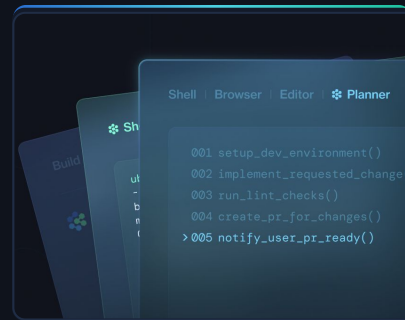
CarController

Cancel Refactor

3 6-12x efficiency gain

AI agents: scale workflows in parallel

AI Software Engineer



Cloud, Asynchronous

Local, Synchronous

GitHub Copilot cursor windsurf

Synchronous vs. Asynchronous

sync:

single-threaded, human-in-the-loop, your attention is focused on one task

=> AI agent works for 20 seconds - 1.5 minutes

Synchronous vs. Asynchronous

sync:

single-threaded, human-in-the-loop, your attention is focused on one task

=> AI agent works for 20 seconds - 1.5 minutes

async:

multi-threaded, human delegates to AI, switches attention between multiple tasks

=> AI agent works for 10 minutes - multiple hours

Sync

Async

Local

Cloud

Sync

Async

Local

 Windsurf

 **CURSOR**

 **GitHub Copilot**

Cloud

Sync

Async

Local

 Windsurf

 **CURSOR**

 **GitHub Copilot**

Cloud

 Devin

 **Codex**

Sync

Async

Local

 Windsurf

 CURSOR

 GitHub Copilot

CLAUDE
CODE

Cloud

DeepWiki

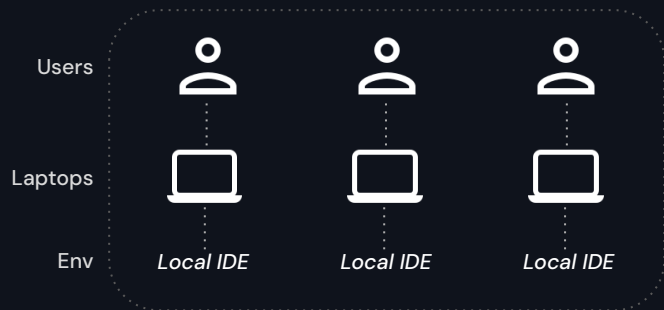
 Devin

 Codex

Cloud + Async enables 10x parallelism

Local AI IDEs

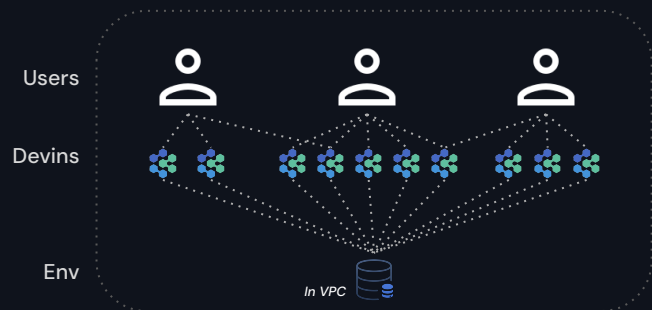
Boost individual speed.



Local • Synchronous • 1-to-1 • Isolated Knowledge

Cloud AI Agents

Unlimited Devins for parallel **capacity**.



Cloud • Asynchronous • 1-to-Many • Organizational Knowledge

Using async agents is a hard but learnable skill

Managing async agents can unlock 10x gains...
...but most people use sync agents.

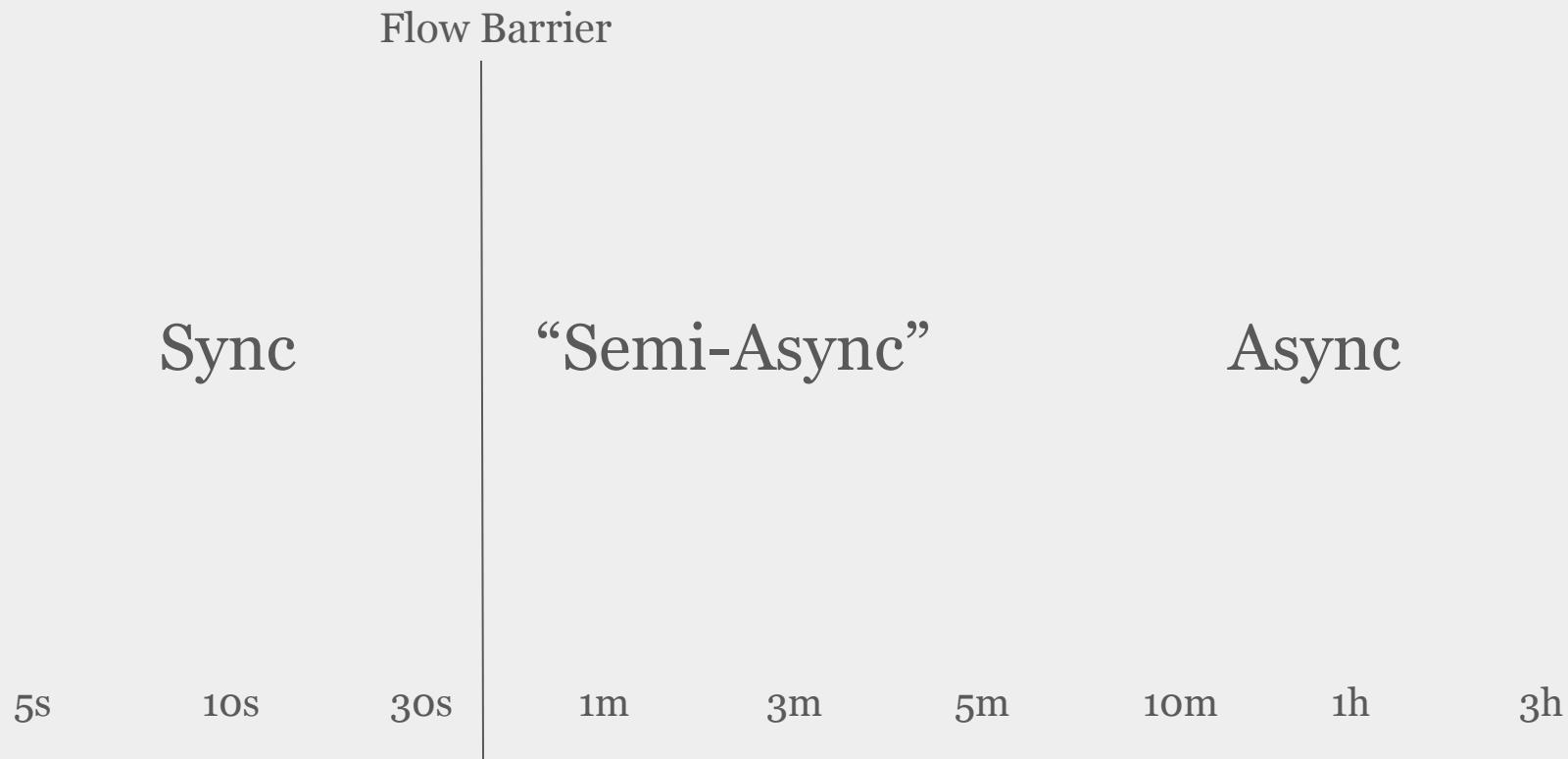
Using async agents is a hard but learnable skill

Managing async agents can unlock 10x gains...
...but most people use sync agents.

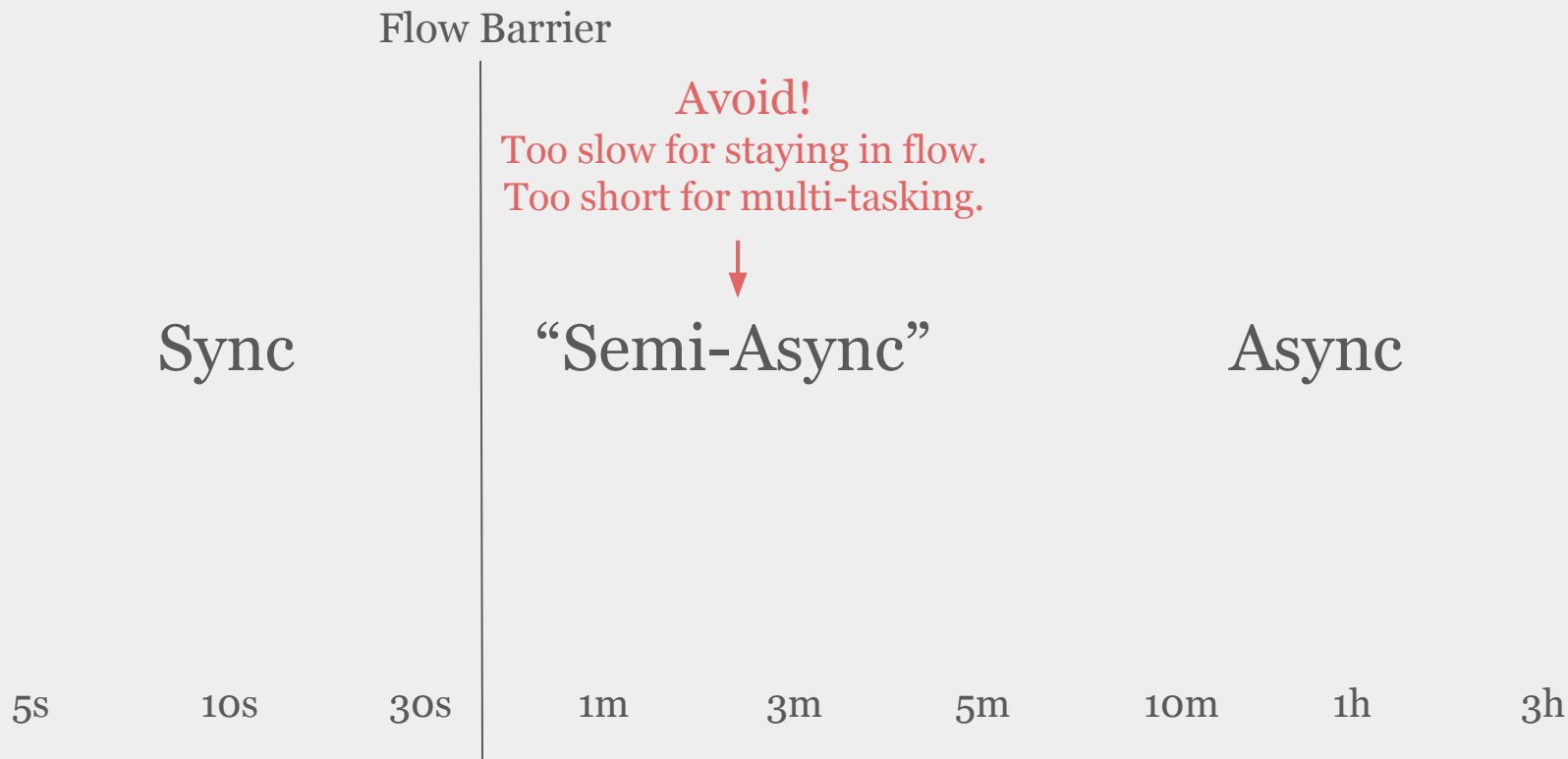
Why?

- Turns out management & delegation is a difficult skill to master – whether it's humans or agents.
- Requires ability to cycle between multiple tasks and quickly understanding new context

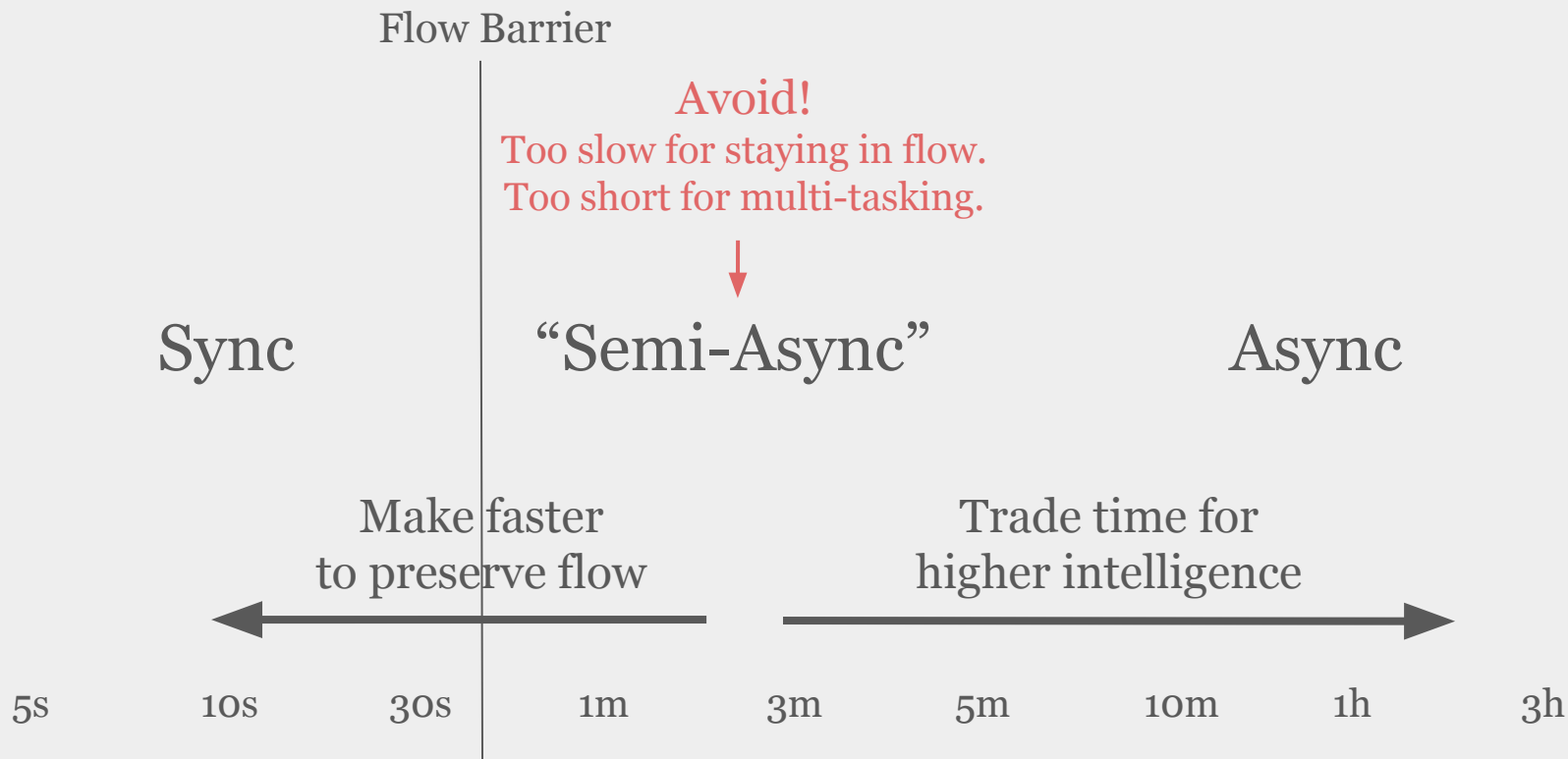
Semi-Async: The awkward middle

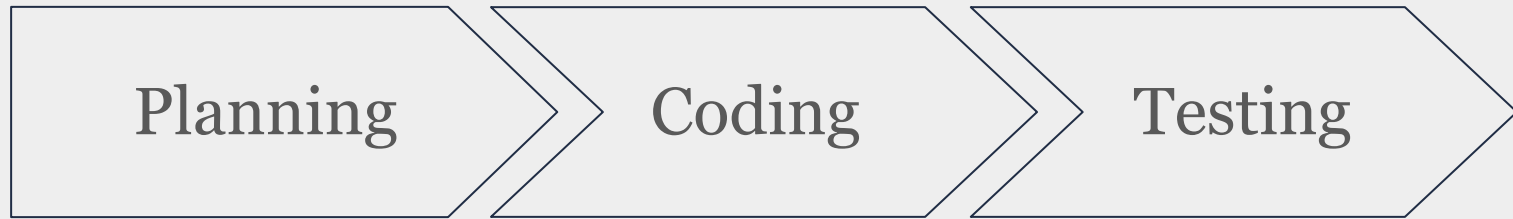


Semi-Async: The awkward middle



Semi-Async: The awkward middle



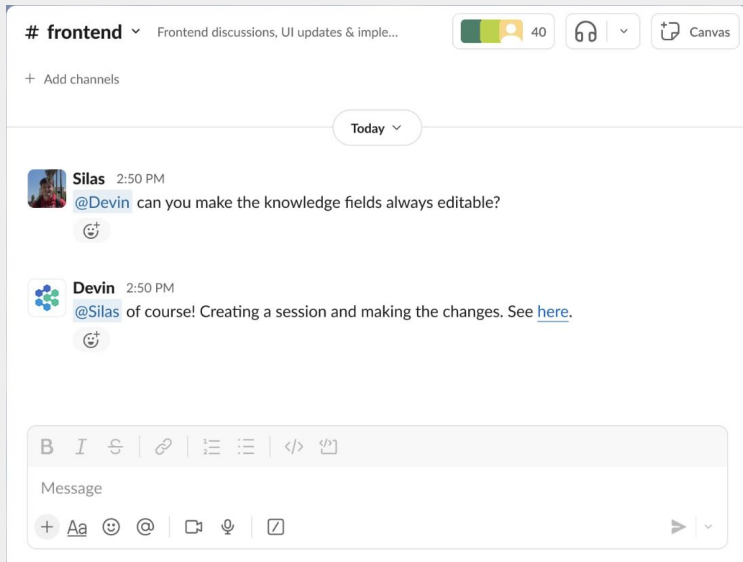




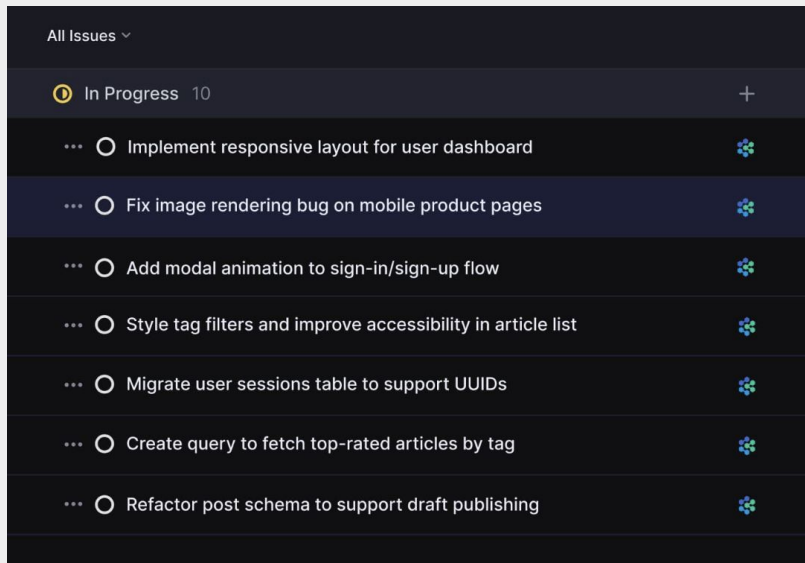
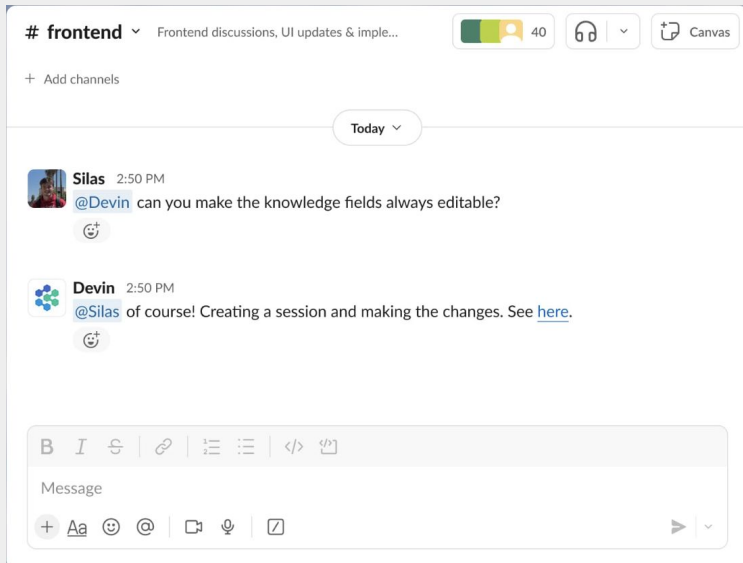
Planning with Windsurf & Devin

1. DeepWiki
2. Ask Devin
3. Codemaps
4. DeepWiki in Windsurf

Delegate the **coding** to the agent



Delegate the **coding** to the agent



Testing the agent's changes

Common workflow:

1. Delegate task to Devin (async)
2. Test & refine changes in Windsurf (sync)

Testing the agent's changes

Common workflow:

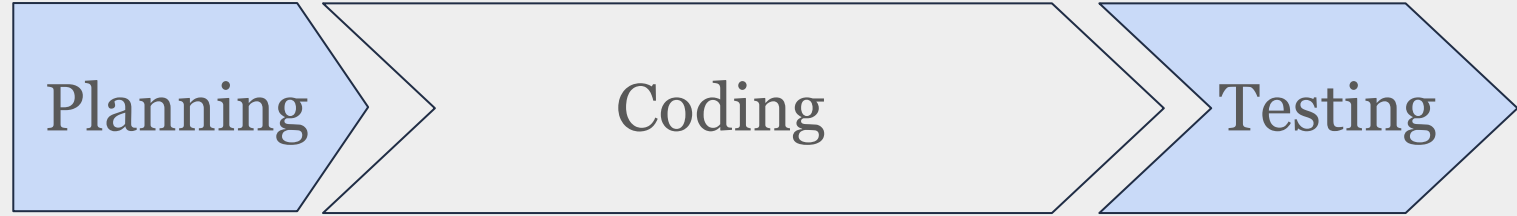
1. Delegate task to Devin (async)
2. Test & refine changes in Windsurf (sync)

Future outlook:

If async agents could test autonomously, the leverage increases.
This is slowly starting to become a reality.

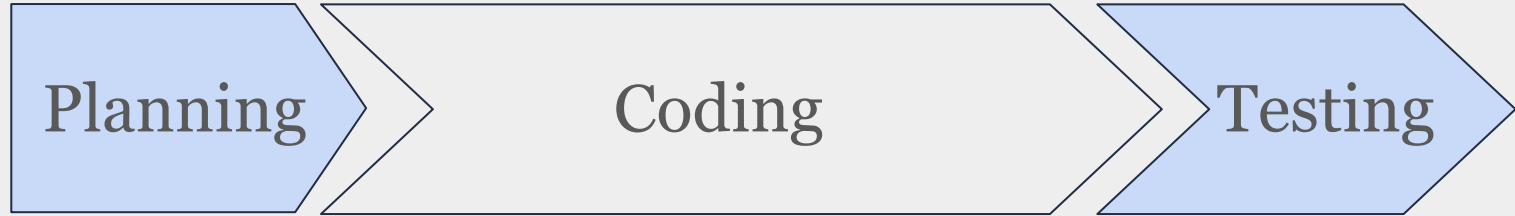
Where are we headed?

Today:

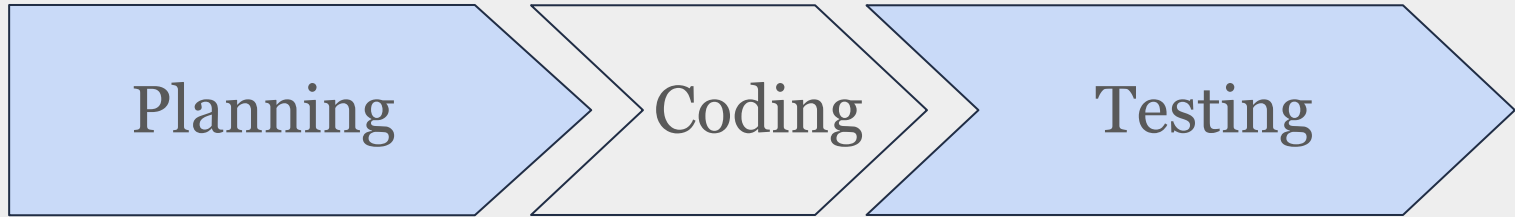


Where are we headed?

Today:



Future:



Where are we headed?

1. The human engineer as the agent manager
 - a. Leveraging sync tools to solve the most difficult problems
 - b. Leveraging async tools to achieve 10x leverage

Where are we headed?

1. The human engineer as the agent manager
 - a. Leveraging sync tools to solve the most difficult problems
 - b. Leveraging async tools to achieve 10x leverage
2. Valuable skills for the future:
 - a. Delegation & multi-threading
 - b. Code reading
 - c. Planning, scoping, architecting

Thank you!