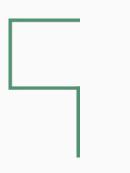


### Al capabilities are outpacing human review

TODAY: Simple requests to AI



Simple responses Review is EASY



SOON: Complex requests



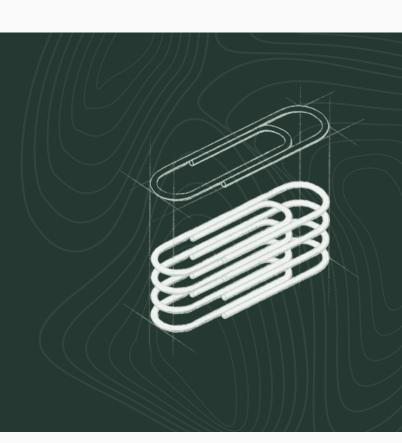
Complex responses Review is... SKIPPED?

The Problem Atlas

# Today's oversight doesn't scale to everyday Al agents.

When it cost <\$1/day/"person" to simulate an "employee", how do you understand or steer their activities?

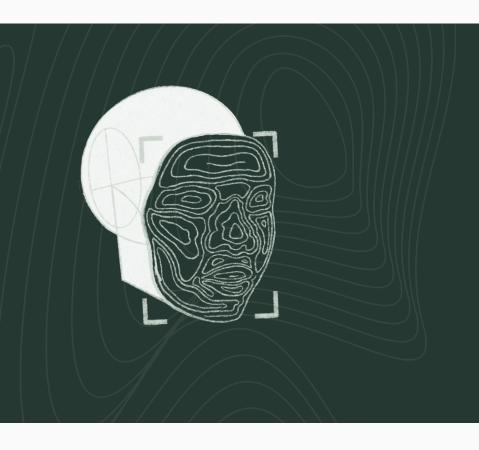
The resulting arms race from using "profit as proxy for good" could destabilize any human system.



### Al makes disruption easier than stabilization

Domain	Benefit	Risk		
Systemic	Improve human review	Outpace human oversight		
Cyber	$\rightarrow$ Fix software vulnerabilities	! Make new computer viruses		
Bio Bio	→ Cure diseases	! Make new pathogens		
Law	→ Patch legal ambiguities	! Find legal loopholes		
Society	→ Reduce information overflow	! Create disinformation		

The Problem Atlas



# Everyone wants human-level Al agents.

No one can define "good behavior for humans."

- "Good AI" is...
- $\rightarrow$  harder,
- $\rightarrow$  subjective,
- → a moving target

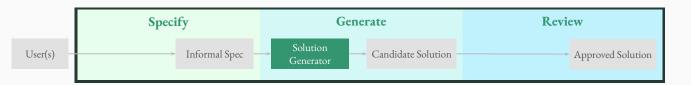
The Solution Atlas



The Solution Atlas

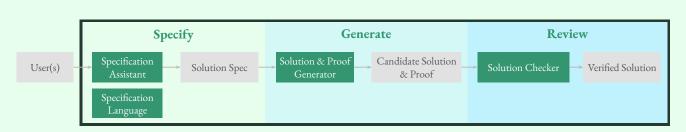
### **Specifications:** human-reviewable intermediate outputs from Al

#### Not this





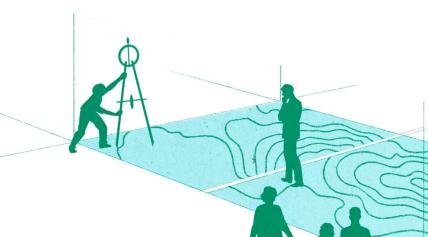
### **But this**





# An international standards organization for verifiably governable AI

Make it easy and rewarding for individuals, companies, and governments to build specification-driven AI



Why A Non-Profit Atlas

This architecture is the best way to govern AI, but it only works if everyone uses it.

As a non-profit, we'll welcome Al companies into an interoperable ecosystem instead of competing for market share.



The Plan Atlas

### Build and deploy tools one vertical at a time

(e.g. match great people to funding, prototypes, customers, and investments)

V	Done
<b>*</b> /*	We're building
SOON	Others' progress

Stage	Cyber	Bio	Society	Law	etc.
Relevant experts aware of AI risk?	<u> </u>	<u> </u>	<b>▽</b>	SOON	
Specification language exists?	<b>V</b>	چېڅ			
AI enhanced spec generators exist?	γ̈́γÅ	SOON			
AI enhanced solution generators exist?	<sup>م</sup> ُرِّحُ	SOON			
AI enhanced solution checkers exists?	<del>***</del>				

### Progress so far

**Atlas** Atlas was founded Q4 2023



Domain 1

### Cyber

Leverage growing AI capabilities to scale the use of existing spec languages for software

First Deliverables

Formal Methods + AI 2-pager and Coq to Lean translation

Current step

Project list of 15 tools to upgrade & formally verify legacy software



Domain 2

### Bio

Goal

Make a new spec language

**Current Step** 

Refining proposal for a toxicity forecasting competition and recruiting a project lead



Building a

### Community

Co-organized 4 workshops

See our events page

Organized an email list

> Organizing discussions among collaborators

### Al risk is better averted one domain at a time.

Rather than attempting to solve the whole problem at once.

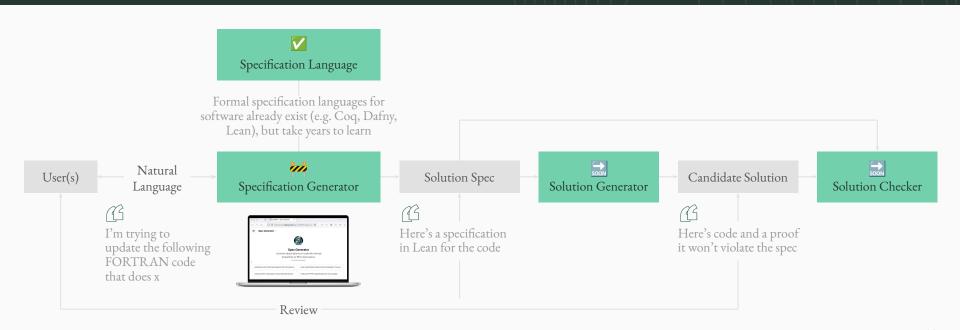
### LLMs can scale Formal Verification.

(an existing but costly specification language for software)

### Cyber Example Product: Update Legacy Software

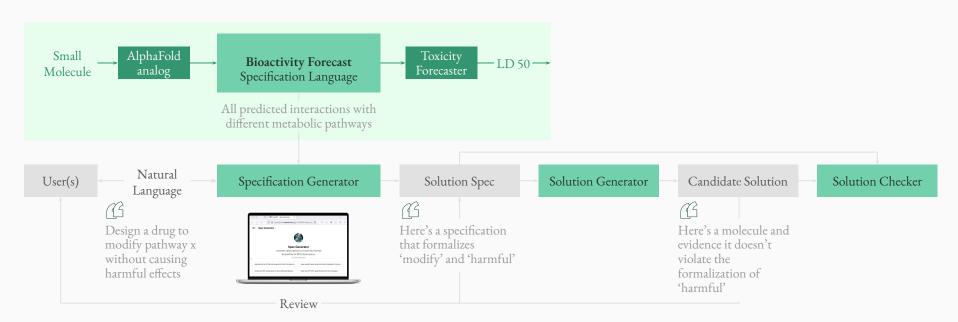
### Updating software is critical but risks breaking capabilities

Specs make this update secure (and future updates easy) - read more here



### Organize a competition to create tools to predict bioactivity & toxicity

You can now screen new molecules with predicted bioactivity. This could automate drug discovery, environmental impact, or similarity analysis for controlled substances



The Team Atlas



### Evan Miyazono

Protocol Labs\*

→ Head of Network Goods

Created and led a venture studio

(up to 25 people; ~\$7M/yr), and

spun out 3 for-profits & 3 non-profits:



→ Head of Research Created and led the research grants program, metascience, and special projects teams.

**Caltech PhD** → Applied Physics

**Stanford BS/MS** → Materials Science



### Software Lead Daniel Windham

Apogee Research → Principal Software Engineer
Co-led software development and
usability on STITCHES, one of the most
successful DARPA program results
of the decade.

Coda

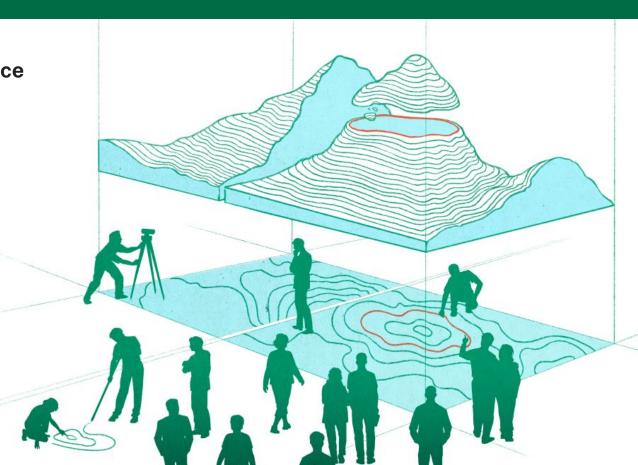
→ Software Engineer

Shipped 13 projects in 22 months to support pre- and post-launch growth; Coda now has 1M+ users.

**Harvard BS** → Physics, Computer Science

### Selected EoY 2024 goals

- → Produce persuasive evidence
  that LLMs are ready to scale formal
  verification in real-world systems
- → **Identify a stakeholder**who can use LLMs to scale
  formal verification in the world
- → Organize a conference for 100+ people on provable AI safety properties
- → Start a competition to advance toxicity forecasting



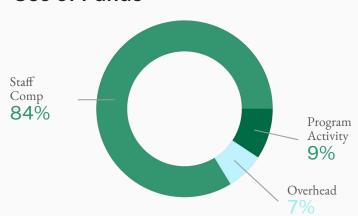
What We Need Atlas

### \$2.5-3.5M Target

to focus on key results through end of 2025



#### **Use of Funds**



### **Estimated monthly spend**



### Want to support us? Let's chat!

https://calendly.com/miyazono/30-min



### **Appendix: Additional Planning Links**

**Atlas** 

#### 2024 Annual and quarterly OKRs

https://docs.google.com/spreadsheets/d/15fSq-c9 huPqhHJ5B3gpwGn0gcCYXxIgWKmaSRGxS60

#### 2024 Gantt Chart:

https://docs.google.com/spreadsheets/d/1dzfNB\_C36NrSQF6gF70e7Vlb7ckm4ydzY4nMvmOr18A

#### Line-item budget forecast here (sorted by decreasing marginal value):

https://docs.google.com/spreadsheets/d/13TrwA6X8yOfLKoRPeqVeHdnRK9\_td3MOFMtvEtlM9Hw

#### **Update emails:**

https://groups.google.com/a/atlascomputing.org/g/updates

### Atlas Computing - Org Chart

Last updated June 2024

We made two offers that have been accepted! The rest of the chart shows potential growth.



**Evan Miyazono** 

Atlas



**Ops & Comms Lead** Mishaal Lakhani (starts July 1)



**Product Lead** [not announced yet] (starts Aug 1)



**Software Lead Daniel Windham** 



**Development Lead** (to hire)



Bio Spec Lead (to hire)



FV+Al Research Lead (to hire)



Base funding request

Ambitious funding request

Max funding request

4

3



FV Application Engineer



Al Developer