

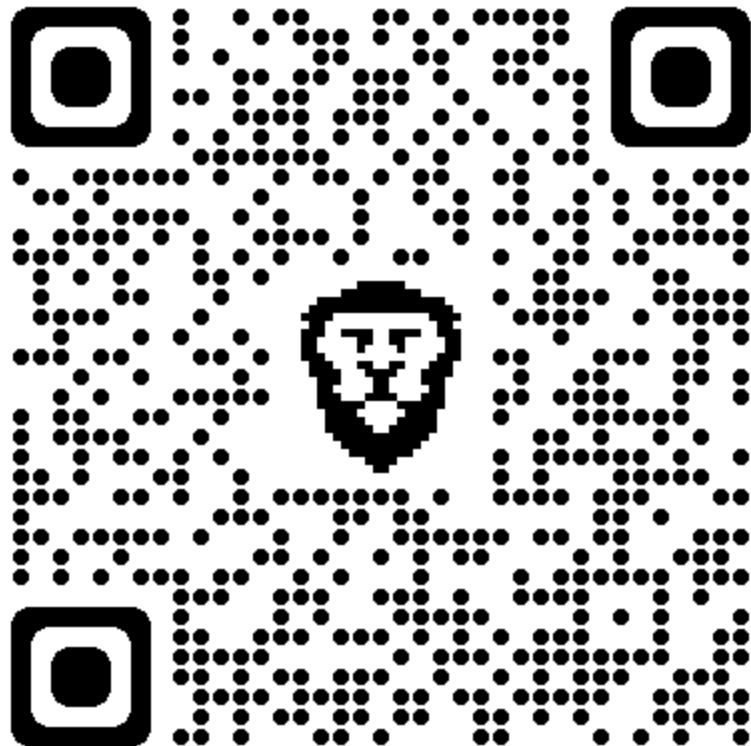
# INNOVATE WITH AI: BUILD CHATGPT-LIKE APPS

CALVIN HENDRYX-PARKER, CTO  
SIX FEET UP



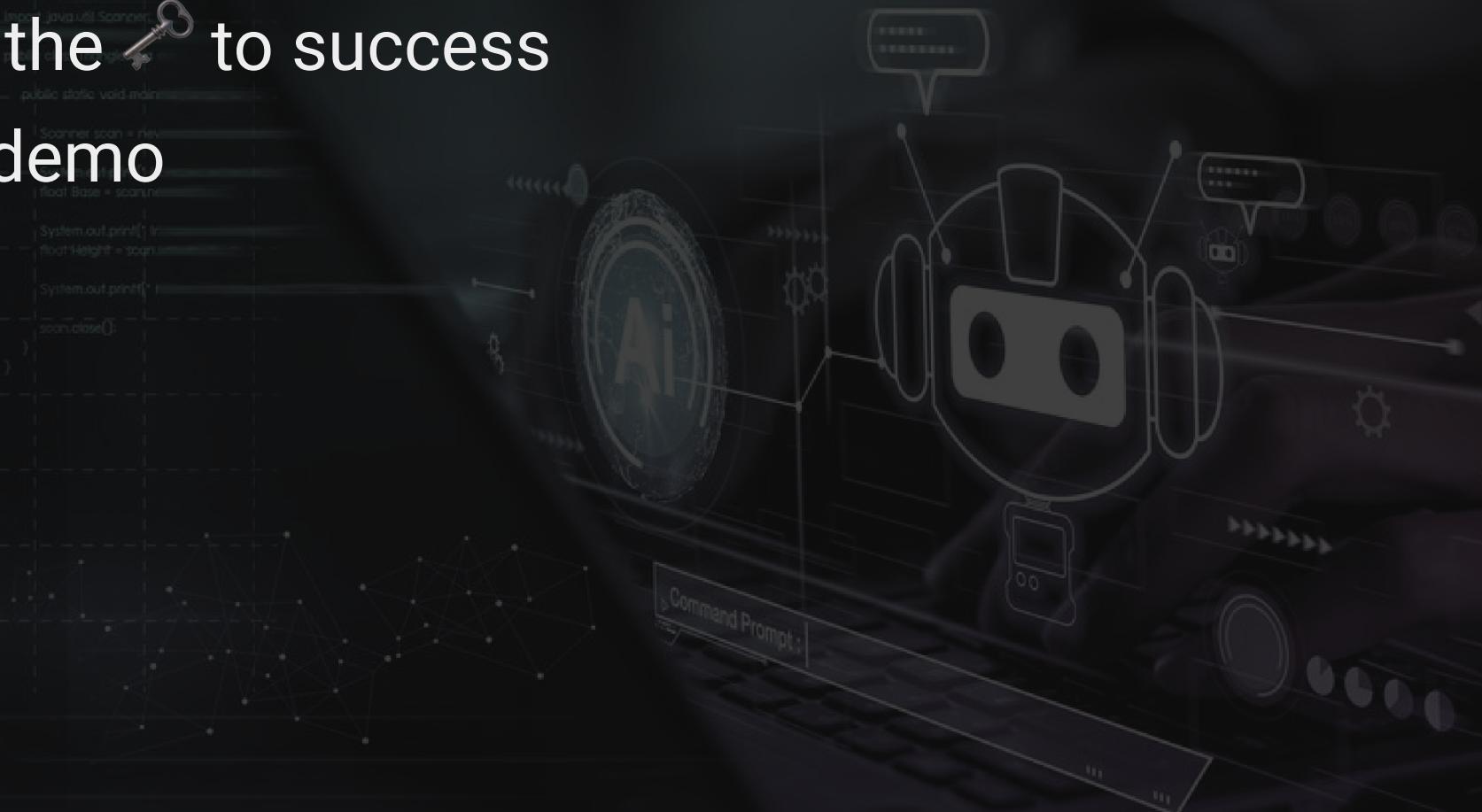
# GITHUB REPOSITORY

<https://github.com/sixfeetup/rally-llm-presentation>



# TODAY'S AI JOURNEY

- » AI: both a threat and a multiplier
- » Data management: the  to success
- » Build together: live demo

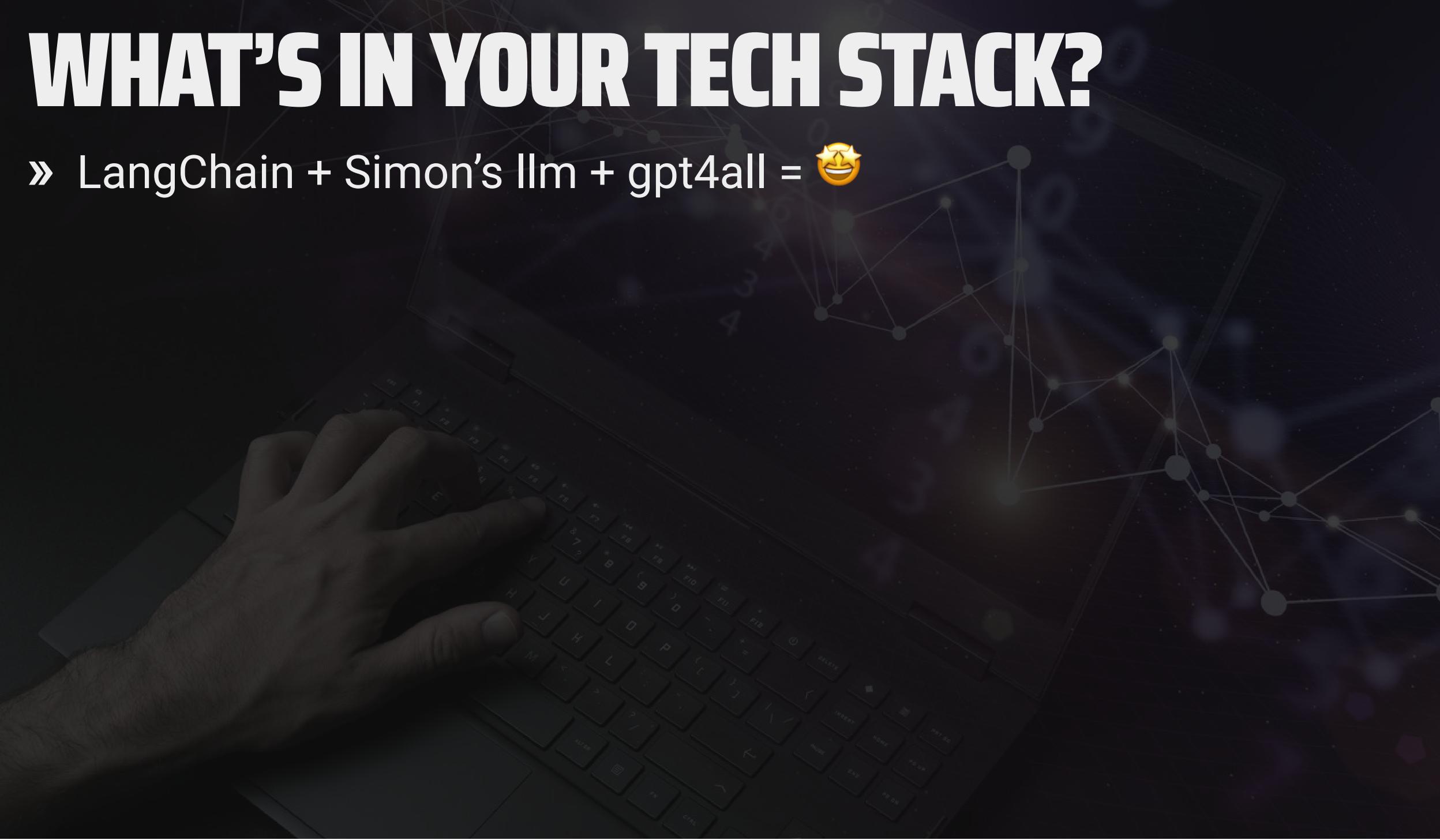


# DEALING WITH DATA: DIGGING FOR GOLD 💰

- » Data has quirks: scans, PDFs, tables, oh my!
- » How can you make your data readable for an LLM?

# WHAT'S IN YOUR TECH STACK?

» LangChain + Simon's llm + gpt4all = 😁



# LLM: SEARCH MEETS NATURAL LANGUAGE

- » A simple UI
- » Challenges?
- » Cataloging the information as language
- » Indexing parameters

# TESTING ACCURACY

Beck's Hybrids

WELCOME, GLENN. [VIEW SITE](#) / [DOCUMENTATION](#) / [CHANGE PASSWORD](#) / [LOG OUT](#)

Home > Chatpfr > Models

AUTHENTICATION AND AUTHORIZATION	
Groups	<a href="#">+ Add</a>
Users	<a href="#">+ Add</a>
CHATPFR	
Flags	<a href="#">+ Add</a>
Doc sources	<a href="#">+ Add</a>
Docs	<a href="#">+ Add</a>
Pages	<a href="#">+ Add</a>
Models	<a href="#">+ Add</a>
Questions	<a href="#">+ Add</a>
Answers	<a href="#">+ Add</a>
Critiques	<a href="#">+ Add</a>
Chat sessions	<a href="#">+ Add</a>

Select index to change

[ADD INDEX +](#)

◀ 2023 July 21

7 Models

Action:  Go 0 of 7 selected

<input type="checkbox"/>	NAME	MODEL TYPE	IS DEFAULT	3	STATUS	2	TEMPERATURE	1	NUM OUTPUTS	UPDATED	4
<input type="checkbox"/>	FactsMan	GPT-3.5 Turbo	<span>✓</span>		Ready		0.1		512	July 21, 2023, 7:51 p.m.	
<input type="checkbox"/>	Lt. Data	GPT-3.5 Turbo	<span>✓</span>		Ready		0.4		512	July 21, 2023, 8:09 p.m.	
<input type="checkbox"/>	data	GPT-3.5 Turbo	<span>✓</span>		Ready		0.4		512	July 21, 2023, 5:04 p.m.	
<input type="checkbox"/>	Ryker	GPT-3.5 Turbo	<span>✓</span>		Ready		0.7		512	July 21, 2023, 5:05 p.m.	
<input type="checkbox"/>	Picard	GPT-3.5 Turbo	<span>✓</span>		Live		0.8		512	July 21, 2023, 8:33 p.m.	
<input type="checkbox"/>	troi	GPT-3.5 Turbo	<span>✗</span>		Live		0.9		512	July 21, 2023, 8:07 p.m.	
<input type="checkbox"/>	Q	GPT-3.5 Turbo	<span>✓</span>		Ready		1.0		512	July 21, 2023, 8:29 p.m.	

7 Models

FILTER

By is default

All

Yes

No

By status

All

Live

Offline

Ready

Building

Error

By model type

All

GPT-3.5 Turbo

Davinci-003

Ada-001

# TESTING ACCURACY

Groups + AddUsers + Add

## CHATPFR

Flags + AddDoc sources + AddDocs + AddPages + AddModels + AddQuestions + AddAnswers + AddCritiques + AddChat sessions + Add

## Lt. Data (self.is\_default=True)

Name:

Lt. Data

Model type:

GPT-3.5 Turbo

Status:

Ready

 Is default

Temperature:

0.4

Controls randomness: Lowering results in less random completions. As the temperature approaches zero, the model will become deterministic and repetitive. Higher temperature results in more *creativity*. This is a build-time parameter – not run-time.

Knn:

2

Max source pages to include as context for each query.

Max tokens:

512

Max total number of tokens in input for prompt helper.

Max input size:

4096

Number of outputs for the LLM.

Num outputs:

512

Floating point factor between 0.0 and 1.0 for the percent of tokens to overlap between chunks for input to the prompt.

Max chunk overlap:

0.20

Max number of tokens in each chunk for input to the prompt.

Chunk size limit:

600

Prompt:

The process is as follows:  
1. If your confidence score is less than 9, you will ask me any questions pertaining to what additional information is needed from me to improve the question (max of 3).  
If the question needs more clarification or details in certain areas, ask questions to get more information to include in the question.  
Otherwise, you will provide your best answer to the rephrased question, along with your questions.  
2. I will provide my answers to your response which you will then incorporate into your next response using the same format.

# WHAT DOES THE APP LOOK LIKE?

Q: how are you doing?

A: I'm doing well, thank you for asking!

-- [Lt. Data](#) ( 1 seconds )

Q: what are you doing?

A: I am researching the best aftermarket closing wheel for my tractor and soil type. I am also looking into soil test values, such as pH, organic matter percentage, cation exchange capacity, percent base saturation, and parts per million of various nutrients. Additionally, I am preparing to plant large round corn seed at a depth of 2 inches in my light-colored loam soil with a low organic matter content. I am also adjusting the tire pressure on my medium tractor with 80 horsepower.

-- [Lt. Data](#) ( 5 seconds )

Q: when is the best time to apply fungicides?

A: The best time to apply fungicides is in the early morning when there is dew present on the leaf surface. This helps the fungicide spread and be absorbed more effectively into the plant.

-- [Lt. Data](#) ( 2 seconds )

Q: when is the best time to terminate cover crops?

A: The best time to terminate cover crops is when the plants are actively growing and before the reproductive phases begin. This is usually when the plants are greater than 18 inches tall for cereal rye and greater than 6 inches tall for annual ryegrass. Air temperatures should be at least 45°F or greater when using herbicides, and cloudy weather can limit early spring growth. Contact herbicides do not rely on translocation and are not as weather-dependent, but the chance of killing the entire plant and preventing regrowth is reduced.

-- [Lt. Data](#) ( 5 seconds )

# BUILD YOUR OWN CHATGPT

Bring up a full environment with all the bells and whistles 

<https://github.com/sixfeetup/rally-llm-presentation>

Once checked out, run:

```
$ make check  
$ make setup  
$ source ./langchain_venv/bin/activate  
... or ...  
$ source ./llm_venv/bin/activate
```

# QUESTIONS

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✍️ <https://sixfeetup.com/blog>

