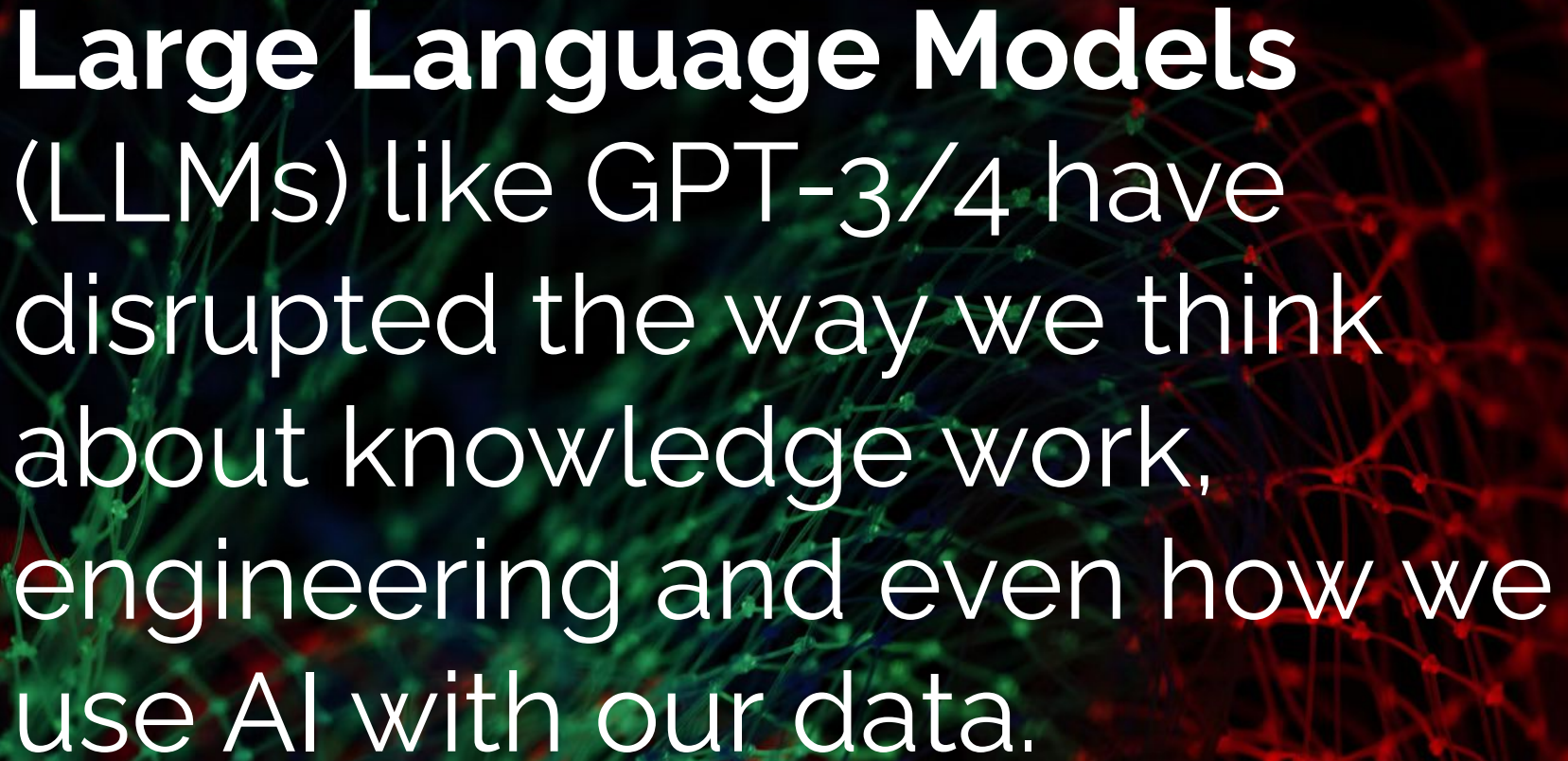


# NoCode, Data & AI **LLM Inside Bootcamp with Cassandra**

Full day bootcamp to familiarize product managers, software professionals, and data engineers to creating next generation experts, assistants, and platforms powered by Generative AI with Large Language Models (LLM, OpenAI, GPT)

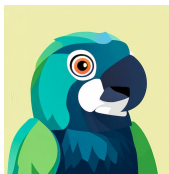
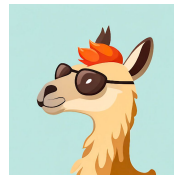
Rahul Xavier Singh Anant Corporation



**Large Language Models**  
(LLMs) like GPT-3/4 have  
disrupted the way we think  
about knowledge work,  
engineering and even how we  
use AI with our data.

# Agenda

- I: Strategy & Theory
- II: LLM Design Patterns
- III: NoCode/Code LLM Stacks
- IV: Build a Custom ChatBot with LLM your Data



ANTHROPIC

co:here



.bubble



LangChain

Astra DB



LlamaIndex



# Overview



- **Cassandra has a timeline opportunity to leverage the adoption of LLM in business automation with accessible ML**
- **Thanks to current advancements we can show users how to build scalable LLM / generative AI powered platforms.**
- **Vector Search in Cassandra is an added bonus.**

# LLM Inside Bootcamp



**8:00AM - Registration / Breakfast**

**9:00AM - Strategy & Theory**

- Intro to AI/Data/Nocode
- Intro to LLM
- Intro to Prompt Engineering

**9:45AM - Break**

**10:00AM - Design Patterns**

- Intro to Language User Interfaces
- Intro to Retrieval Augmented LLM
- Frameworks for Data / Retrieval Augmented LLM

**10:45AM - Break**

**12:00PM Lunch**

**1:00PM LLM Stacks**

- NoCode Framework for AI/LLM
- Full Code Framework for AI/LLM
- Enterprise Framework for AI/LLM

**2:00PM Coffee / Networking**

**3:00 Build your Own Chatbot**

- Code Walkthrough of App
- Setup DB/Vector Indices
- Clone App on Gitpod
- Load Data / Test App

Deploy App

**5:00PM Close**

# LLM Strategy & Theory



## Intro to NoCode, Data & AI

- Convergence of Data / AI / NoCode
- Traditional ML vs. LLMs
- Existing Apps / Plugins to LLMs

## Intro to LLM

- LLM Foundations
- History of LLMs
- Tuning vs. Training LLMs
- Case for Augmenting LLMs

## Intro to Prompt Engineering

- Prompt Engineering Explained
- Pretrained vs. Instruction Trained
- Agent Simulation
- Prompting Techniques
- Few Shot vs. Zero Shot
- Structured Text
- Reasoning/ Chain of Thought
- Self-Criticism
- Ensembling / Get Multiple Answers

# LLM Design Patterns



## Intro to Language User Interfaces

- Existing App Review
- LUI Patterns
- Click to Complete
- Auto-Complete
- Command Palette

## Frameworks for Data Augmented LLM

- LlamaIndex Intro / Walk Through
- LangChain Intro / Walk Through
- AutoGPT Intro / Walk Through
- BabyAGI Intro / Walk Through

## Intro to Retrieval Augmentation

- What is Context?
- Token Limits
- Augmenting language Models
- Data Platform Design
- Data Engineering for Retrieval
- Vector Index Options
- Loaders / LlamaIndex
- Chains / LangChain
- Tools / LC / ChatGPT Plugins



# LLM Stacks



## NoCode Framework for AI / LLM

- LLM: OpenAI
- Environment: Bubble
- Framework: Airtable Plugin, API Connector, Make
- Data: Astra, Airtable

## Full Code Framework for AI / LLM

- LLM: OpenAI
- Environment: Gitpod , Python, PIP, Modal?
- Framework: LangChain, LlamaIndex
- Data: Astra
- Index: Elasticsearch

## Enterprise Framework for AI / LLM

- LLM: Azure OpenAI / Amazon Bedrock / Kubernetes
- Environment: Python, Spark, Serverless Functions
- Framework: LangChain, LlamaIndex
- Data: Astra
- Index: Elasticsearch



# Build your Own Chatbot



## Code Walkthrough of AskPlanetCassandra

- Environment: Gitpod , Python, PIP, Modal?
- Framework: Langchain, LlamaIndex, AWS Lambda, Discord
- Data: Astra
- Index: Elasticsearch

## Setup OpenAI/Astra/Index

- OpenAI Account Setup
- Astra Account Setup
- Astra DB Create Schema
- Index Setup
- Index Schema Setup

## Setup Gitpod / Clone Data

- Gitpod Clone / Setup
- Add Keys, Run Tests in Jupyter
- Run Basic Chat Interface

## Configure Data Sources / Tweak Prompts

- Prompt Templates
- Tools: Google Search, Wolfram Alpha
- Sources: YouTube, Site Crawl

## Run Ingestion / Test Chat

- Run LangChain/LlamaIndex Loader
- Verify Data in DB/Index
- Test Chat on CLI / GUI

# Thank you and Dream Big.

## Hire Us

- **Design** Workshops
- **Innovation** Sprints
- **Service Catalog**

## Learn from Us

- Read our Playbook
- Join our Mailing List
- Read up on Data Platforms
- Watch our Videos
- Download Examples

## Join Us

- Apprenticeships
- Part Time Contracting
- Full Time Contracting
- Full Time Employment

## Invest in Us

- Sponsor a POC
- Sponsor R&D for License & Support
- Invest in the next Round