



GENERATIVE AI · 5-DAY COURSE

Build with AI

Prompt engineering, RAG, agents and production React AI apps —
for developers

www.reskillwales.co.uk



01 · THE COURSE

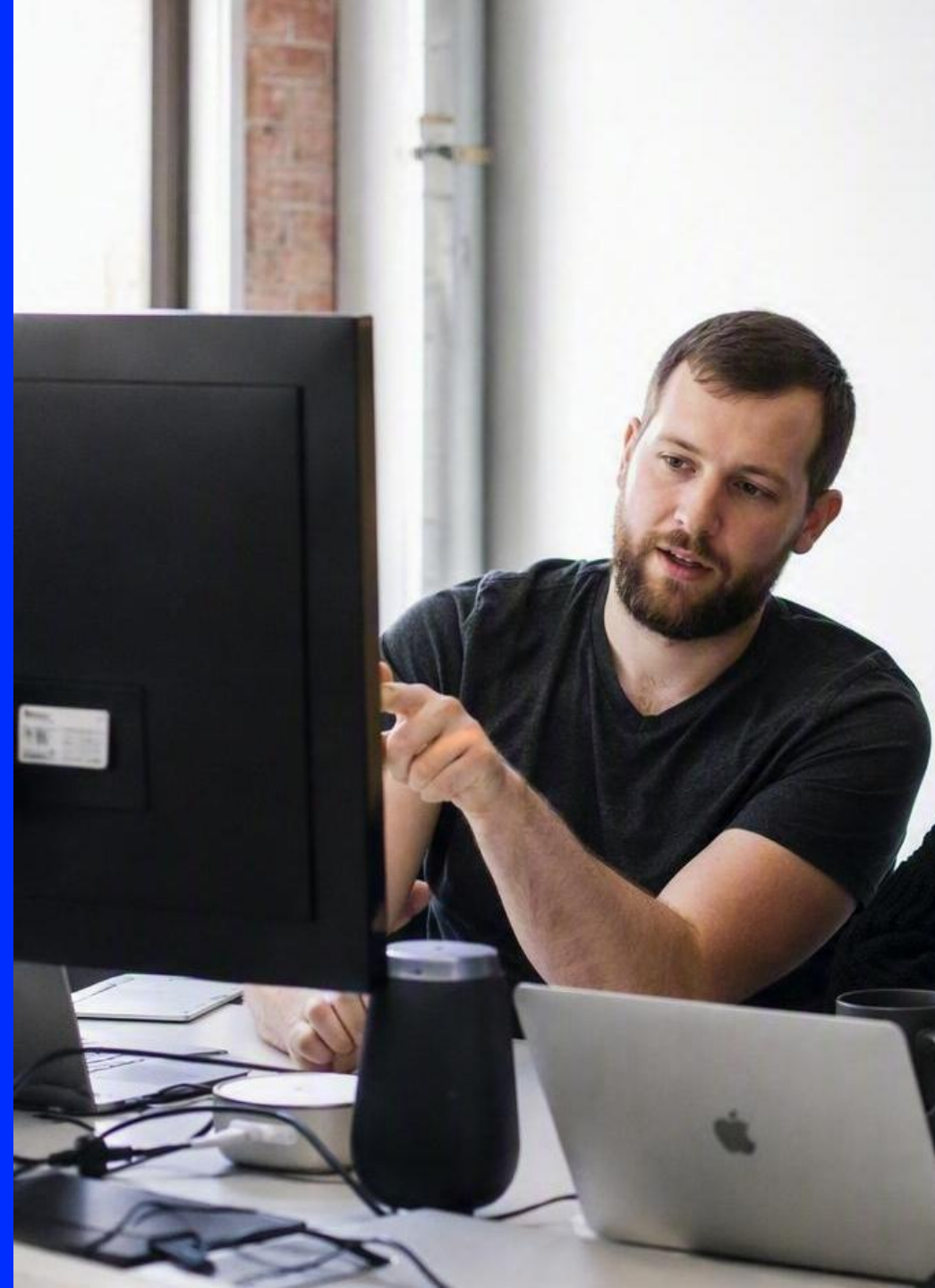
Build with AI

Developer-grade AI training: work directly with the OpenAI and Anthropic APIs, build retrieval and agent systems, and ship a production React AI application.

Mornings are taught sessions. Afternoons are hands-on labs where you build something real.

WANT TO TALK IT THROUGH?

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02 · THE WEEK

Five days at a glance

Day 01

LLM APIs & Architecture

Day 02

Advanced Prompt Engineering

Day 03

RAG Systems

Day 04

AI Agents & Tools

Day 05

Building React AI Applications





03 · FORMAT

How the week works

1

MORNINGS · TAUGHT

Live sessions on the concepts, architecture and patterns behind production AI.

2

AFTERNOONS · LABS

Hands-on labs where you build and keep something real, every single day.



DAY 01

LLM APIs

- LLM architecture & tokenisation
- OpenAI API (Chat Completions)
- Anthropic API (Claude)
- Streaming responses
- Temperature & system prompts
- Error handling & rate limits

LAB

Build a multi-model API client that handles OpenAI + Anthropic





DAY 02

Prompt Engineering

Structured output parsing (JSON mode)

Chain-of-thought reasoning

Few-shot learning at scale

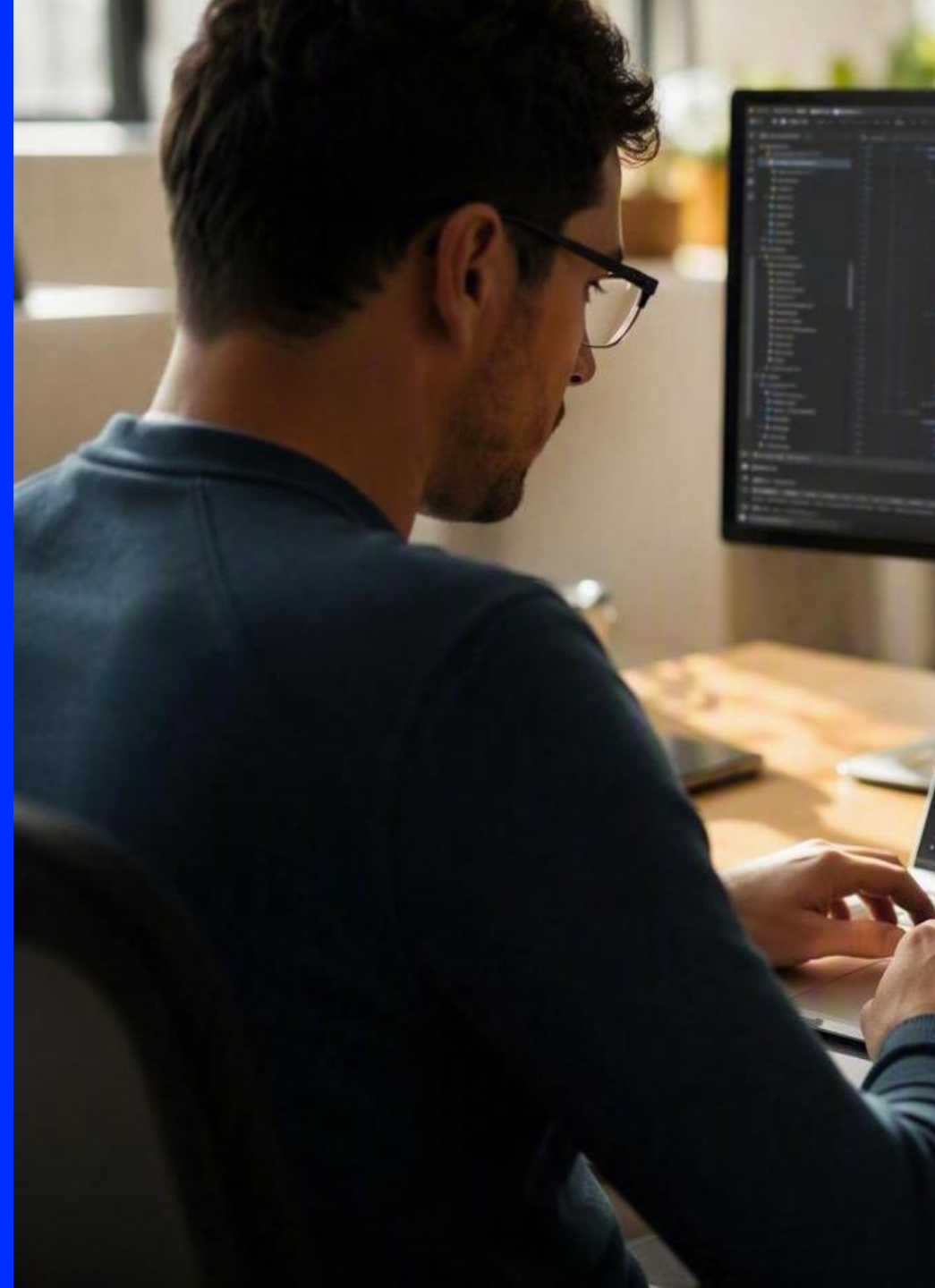
Function calling / tool use

Prompt testing & evaluation

Prompt versioning & management

LAB

Build a prompt evaluation harness with automated scoring





DAY 03

RAG Systems

Embeddings & similarity search

Vector databases (Pinecone, pgvector)

Document chunking strategies

Retrieval pipelines

Hybrid search

RAG evaluation & debugging

LAB

Build a full RAG pipeline over your own document corpus





DAY 04

AI Agents & Tools

Agent architectures

LangChain & LangGraph basics

Tool creation & registration

Memory & conversation management

Multi-step planning

Safety guardrails & limits

LAB

Build an AI agent that can search, calculate and write reports





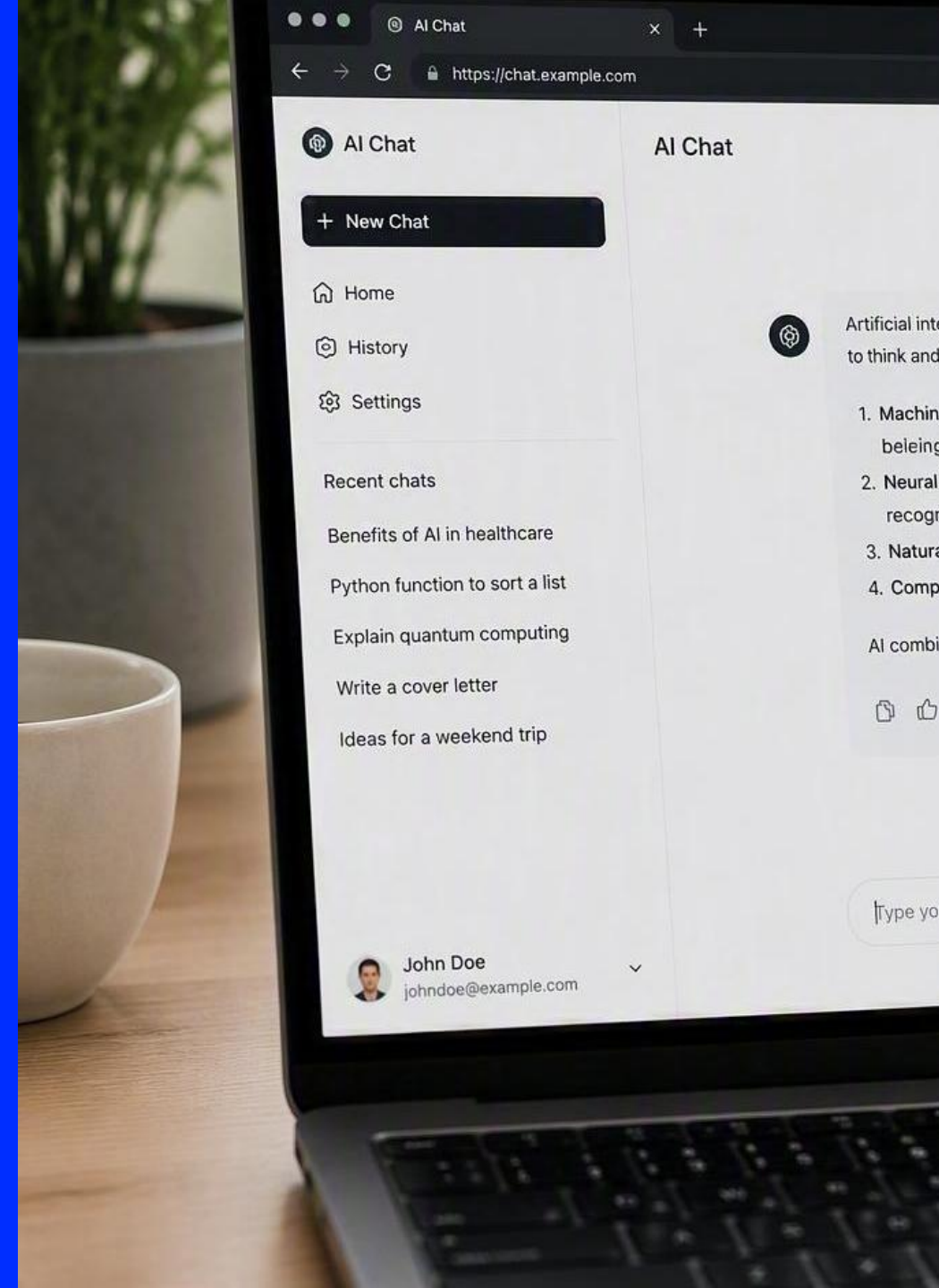
DAY 05

React AI Apps

React + AI architecture patterns
Streaming UI with Server-Sent Events
Conversation state management
AI-powered search interfaces
Deployment to Vercel
Responsible AI in production

CAPSTONE

Deploy a production-ready React + AI application





04 · OUTPUTS

What you build

1

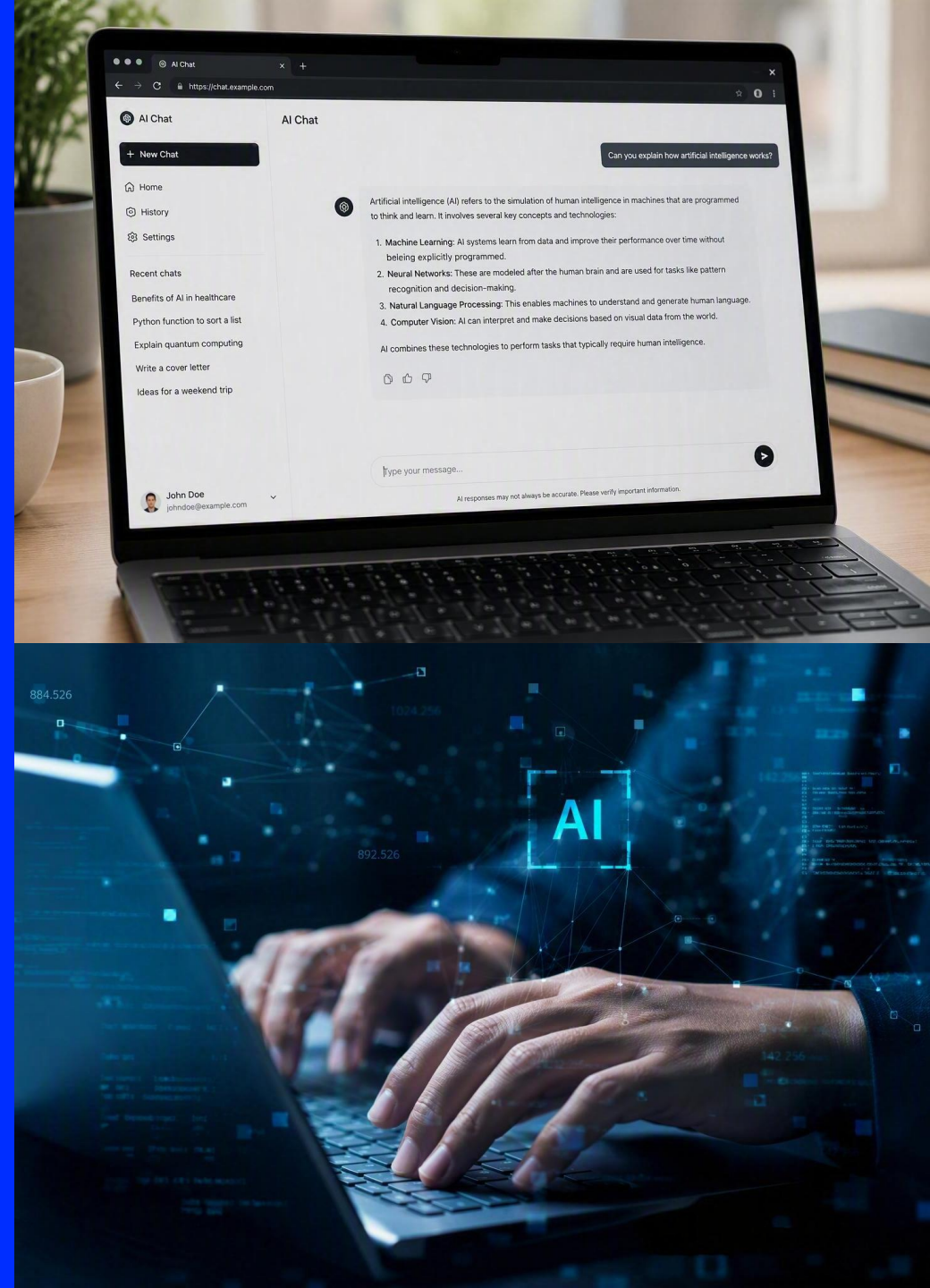
A multi-model API client and a prompt evaluation harness with automated scoring.

2

A full **RAG pipeline** running over your own document corpus, with retrieval you can debug.

3

An AI agent with tools, plus a deployed React AI application in production.





05 · GET READY

Who it's for

1

WHO IT'S FOR

Working developers comfortable with JavaScript or Python. No prior AI experience needed.

2

WHAT TO BRING

A laptop, OpenAI and Anthropic API keys, Node.js installed, and your own project idea.



SEE YOU SOON

Build with AI

Generative AI & Prompt Engineering for Developers

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