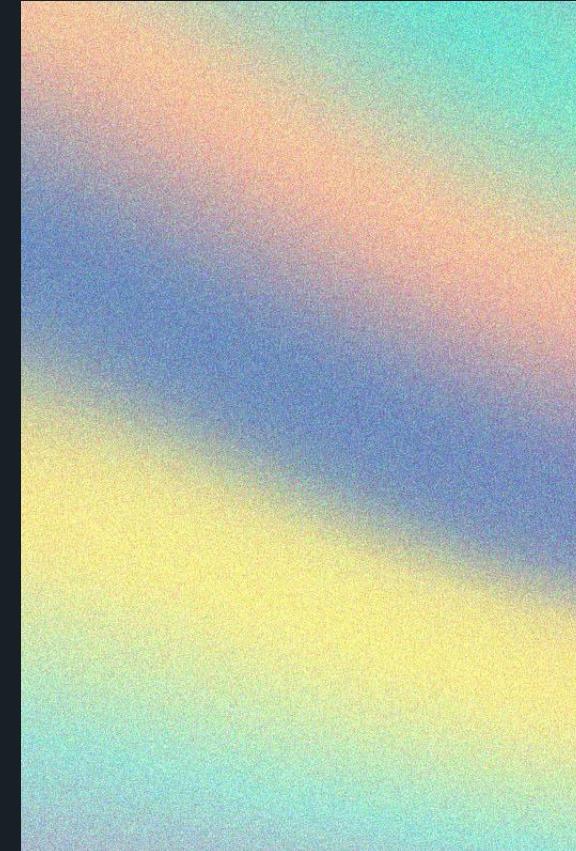


DOING MORE WITH LESS

Practical applications for
generative AI in cybersecurity

Matt Adams



AGENDA

1 INTRO / OBJECTIVES

**2 USE CASE 1:
THREAT MODELLING**

**3 USE CASE 2:
SECURITY
AWARENESS**

**4 USE CASE 3:
WEB APP SCANNING**

**5 IDENTIFYING USE
CASES**

6 BEST PRACTICES

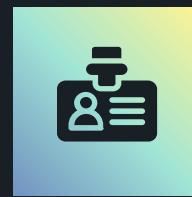
7 Q&A

INTRODUCTION



WORK

Security Architect,
Santander UK



CAREER

Consultant,
Contractor,
Permanent



HOBBIES

Smallholding,
Homelabbing,
Coding

OBJECTIVES

- 
- Demo some tools
 - Raise awareness of practical applications for generative AI in cybersecurity
 - ~~Introduction to generative AI~~
 - ~~Security risks associated with LLMs~~
 - ~~'Chat with documents' use cases~~

USE CASE **1**

Threat modelling with STRIDE GPT

KEY FEATURES

- 
- Prompt templates parameterised with app details
 - OpenAI model called with formatted prompt
 - Model outputs JSON objects that are parsed into Python dicts

<https://stridegpt.streamlit.app>

<https://github.com/mrwadams/stride-gpt>

USE CASE 2

Generating security awareness content using multiple personas

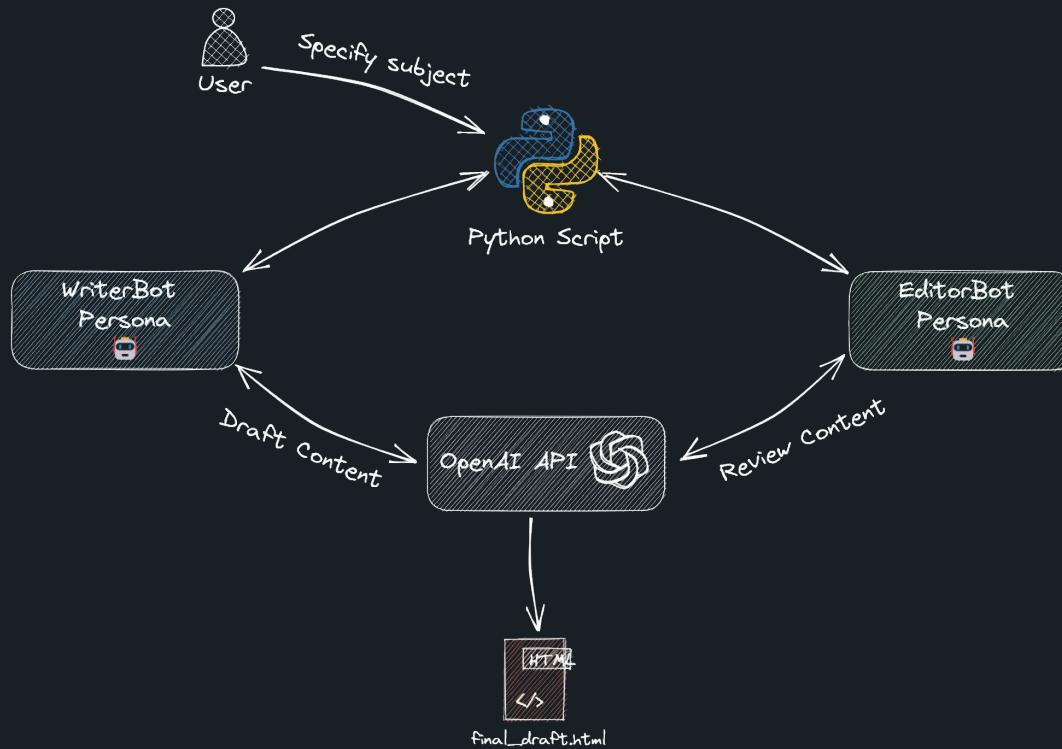


KEY FEATURES

- Simulated conversation between two AI personas
- Use of personas enables specialisation and improves task focus
- Easily customisable to different content generation tasks
 - Add personas, change roles
 - Modify prompts and goals

<https://github.com/mrwadams/beeblobots>

PROCESS FLOW



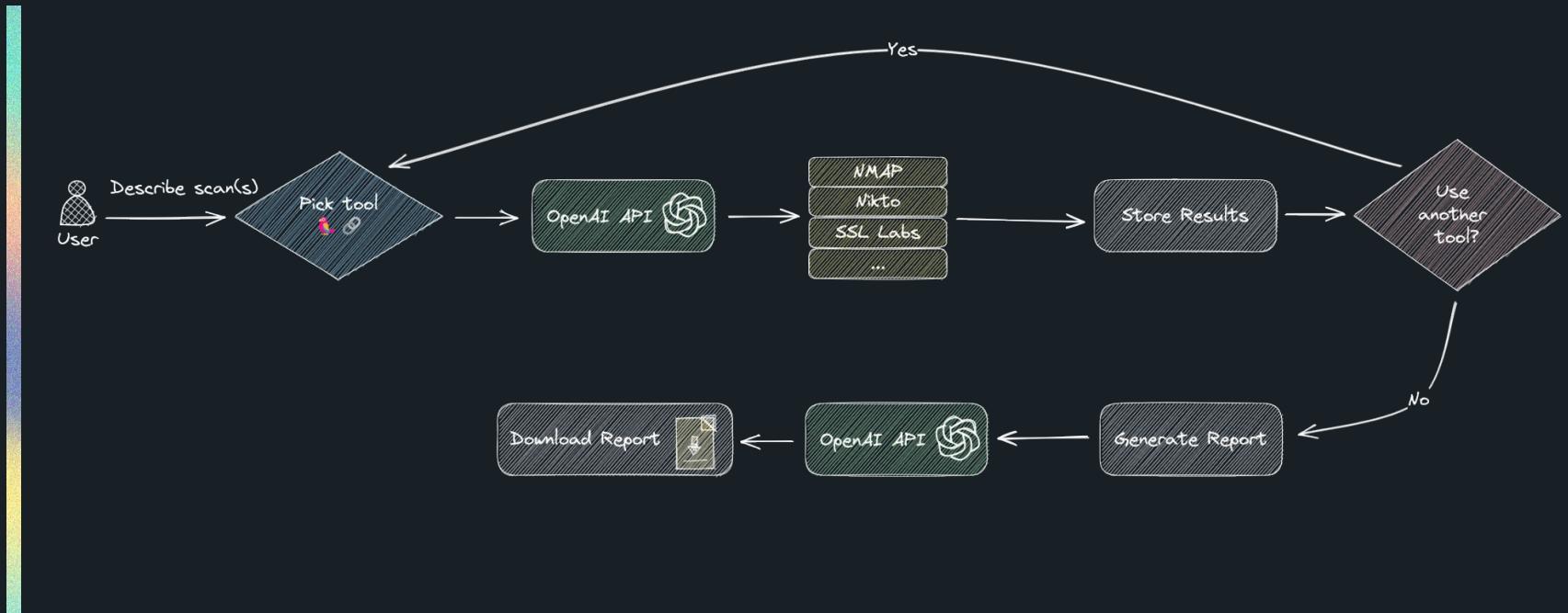
USE CASE 3

Security scanning and reporting using autonomous agents

KEY FEATURES

- 
- User describes required scan(s) in natural language
 - Agent-based orchestration
 - Agent decides which tool(s) to use based on user request
 - Visibility into agent's "thoughts" to improve transparency

PROCESS FLOW



IDENTIFYING USE CASES

- Imagine you had a new intern - what would you delegate?
- Good candidates for generative AI are repetitive and/or tedious tasks that can be automated
- Look for opportunities to augment human capabilities with AI
- Start small with a well-defined initial use case



BEST PRACTICES

- Start with non-critical use cases
- Integrate ‘human-in-the-loop’ reviews
- Monitor closely for bias
- Document processes and track performance
- Be transparent about use of AI

BEST PRACTICES (cont.)

- Evaluate cybersecurity impact
- Watch out for misplaced over-reliance
- Keep developing internal AI expertise

Q&A

**ANY
QUESTIONS?**

THANKS!

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