



Internship Experience UK | BRIGHT
NETWORK

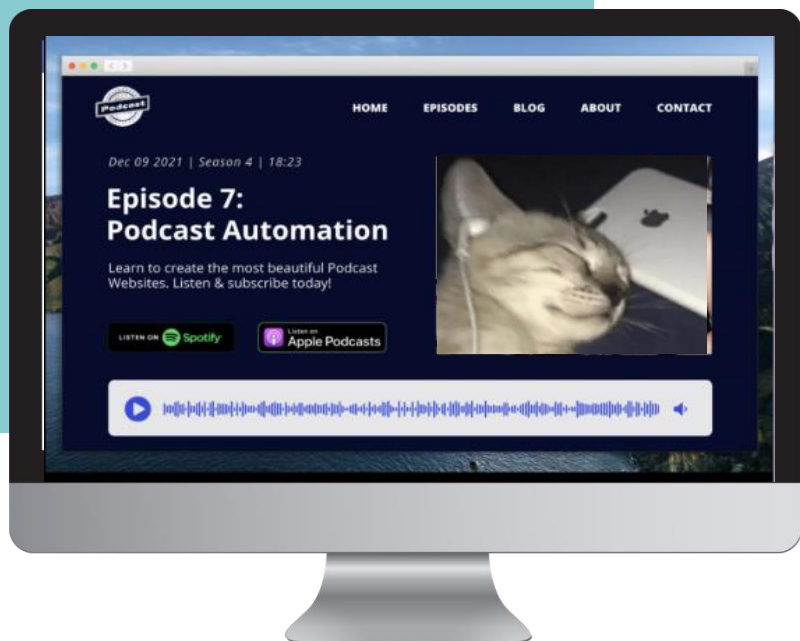
Engineering

Sector Skills Project Introduction

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SITUATION



You've been hired by a **small music media startup**. Their successful podcast and newsletter have led to a spike in traffic, initially bringing a welcome increase in subscriptions.



LLOYDS
BANKING GROUP

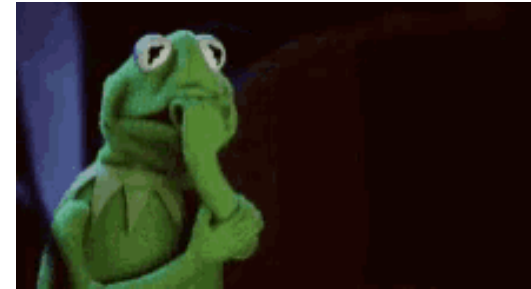
THE ISSUE

However, concerns are growing that some traffic may be **non-human**, and the servers are becoming **overwhelmed**.

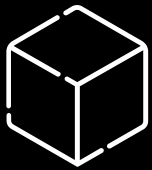
Parts of the website **go down** every few days due to the sheer volume of traffic. With an engineering team of just **three** people, this downtime is severely impacting their **productivity**.

Your task is to solve this issue:

Using a [provided set of logs](#), you **must identify the problem** and determine the **best way to handle the increased traffic**.



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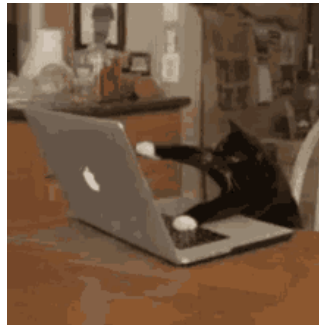


CODE

Include any **code** used to reach your conclusion.

Your code must be in a **runnable state with clear instructions for execution**. Ideally, it should run from a container (like Docker) without requiring local software installation - though this is a stretch goal.

At minimum, **provide a list of required software to build and run your code**.
DO NOT SUBMIT EXECUTABLES.



REPORT



Write a **300-word report** describing your **findings and recommendations** for the company.

State any **assumptions** about the existing system and consider **costs** in your analysis. Since this is a small company with limited resources for bot management, your solution must be **cost-effective**.

PROGRAMMING LANGUAGE

You may use any programming language and tools you like. Choose whatever you find easiest to express your ideas in, rather than what's currently trendy. If you're new to programming, Python is recommended for its easy-to-learn syntax.

USE OF AI

You may use AI tools but avoid relying on them to completely solve the problem. This is a learning opportunity -struggling through unfamiliar errors and scenarios is valuable.

You must verify that anything produced by AI is correct and reliable.

Remember, in the real world, "the AI got it wrong" isn't a valid excuse. You chose to use it, so you're responsible for its output.

NOTES ABOUT THE APPROACH

STRUCTURE

When getting started, think about specific questions you'd like to answer. Begin by analyzing which pages receive the most visits and from which IP addresses. Then research bot control solutions to help form additional questions.

CODE

Your code should be well-structured, commented, and tested. While the exact implementation depends on your chosen tools, use unit tests and keep functions small with single, clear purposes.

Top Tips for the Sector Skills Project

1. Open the sector skills project brief – you can find it in the **Resources section, at the Help Desk and we will email it to you**
2. A **recording** of this session will be shared on Zoom Events
3. You have **until Thursday** to work on the project
4. If you have questions – **ask your BN peers or research online!** You're not expected to know everything
5. Create your sector skills project in a document that allows you to **share it via a link** (Wetransfer, Google Drive or Dropbox)
6. Approach the project as if it were set by a manager in a **real work environment**
7. Focus on doing the project - **do not worry about submitting the sector skills project**
8. Do your best – **we don't grade your work** which means you CANNOT fail the sector skills project!
9. Instructions on how to submit the sector skills project will be shared on **day four**

Reflection criteria

It may be helpful to consider the criteria below when you approach your Sector Skills Project. These are the elements you'll be reflecting on during the self-reflection and peer review sessions on Day 4 of the internship.

- **Research** – evidence of a wide range of sources integrated to produce the work, with accurate referencing
- **Knowledge and Comprehension** – clearly understood the brief set and has answered all aspects of the question
- **Creativity and Imagination** – nuanced and innovative approach to answering the question
- **Structure and Presentation/Design** – order of information presented is clear and logical. Work is produced in a visually appealing and suitable format (e.g. font size, colour, margins, use of images and diagrams). Quality of expression is clear, precise and eloquent. Content is easy to follow and comprehend
- **Problem Solving, Analysis, Evaluation** – draws reasoned and systematic conclusions from the research conducted, and fully explains the purpose of the information presented to answer the set question
- **Numeracy and Commercial Awareness** – all calculations and figures are accurate. There is a strong command of technical terms and concepts, which are used seamlessly and accurately