

Synthesis x Data Scientist Recruitment Challenge 2024

Thank you for your interest in Synthesis. As part of our recruitment process we set a challenge designed to test your thinking, technical ability, and communication skills. We are looking for candidates who are able to extract interesting observations from data, visualise the insights, then give a clearly reasoned opinion about 'why' and 'what' these observations mean.

The challenge has two phases:

1. **Pre-work:** presentation + technical appendix (code/ algorithms/ pseudocode) submitted by email **before the interview starts..**
 - Use any programming language/ tools / packages you believe are suitable - be ready to describe them
 - Feel free to use code from online sources - ensure that you cite and reference appropriately
 - We encourage using data visualisations to best illustrate your findings and help you tell a compelling story around your findings/ hypotheses
2. **Interview:** present your technical challenge (<15mins) to a mixture of Data Scientist and Cultural Strategists. This can be in any format you decide.

We are happy to answer questions and share feedback as you work on your challenge. We encourage you to drop us a mail and take the chance to reach out for advice as you develop your approach.

Good luck!



Data Science Challenge (2024): Non-Alcoholic Spirits

Your client is *Boozeless*, a fictional **non-alcoholic spirits brand**.

After scaling their business across Europe, they now want to launch their line of non-alcoholic spirits in Asia, beginning in Singapore. Their product caters to high-end consumers, and is mainly used to make non-alcoholic cocktails and aperitifs at home and in select bars and restaurants.

Boozeless have identified 3 types of venues that were highly successful in building their image in Europe.

- Young, Mild and Free: modern venues connected with an active, healthy and sporty lifestyle
- Aesthetically Anchored: venues with unique design, where people go for special occasions
- Haute Cuisine: boundary pushing restaurants that aren't afraid to try new things in their menus.

Your client has already launched in specialist stores, and now they are looking for advice on which F&B outlets to target with their offering. Specifically, they would like to know:

1. What is the size of the opportunity in Singapore? I.e. How many venues in Singapore are potentially a good fit for *Boozeless*?
 - a. Which data points were used to assess venue fit and priority?
2. What are the 20~25 priority venues *Boozeless* should launch with? Why?
3. How can publicly available data be used to help inform the launch & marketing activities for their roll-out in F&B outlets in Singapore?¹

Client Input: *Boozeless* can give input and answer your questions to help build your approach. Please share any questions you may have via email, and allow for ~1 working day response time.

Datasets: your colleagues have provided you with [a dataset](#) of F&B venues in Singapore, extracted from Google Maps, including metadata.

Output: Please share your key findings and implications for the client, addressing the questions above. Please also include a brief explanation of your approach and analysis methods, and highlight any key assumptions you've made.

¹ Note: please provide a description of your proposed approach and what it would enable the client to do. **You do not need to implement this approach, or write any code to test it.** Your suggested approach can use the datasource provided, or any other publicly available [data source](#) that you think could be useful.