Capital Match data science challenge

30 Oct 2018

In this task you will be spearheading the architecture, design and implementation of an automated credit assessment algorithm.

This algorithm will be part of our invoice financing platform, which holds transactional data of borrowers and investors and will aid the team in the credit decision making process (approvals, interest rates etc.) for new loans.

Your task is to give a high-level overview of such a credit assessment algorithm and possibly implement it in a simplistic way for showcase purposes.

This task is deliberately unspecific so that you can utilize your creativity and make wild assumptions about anything that is not specified. While doing that, always document your assumptions and explain the reasoning, if applicable. Since you will work closely with other functions in the company, not only documentation and clear formulation of assumptions is a must, but also your ability to understand business logic is critical. You might want to perform research about our company or send us questions via e-mail (hr@capital-math.com) while completing the task:

1. Propose an architecture / design

- Input format (our platform utilizes event sourcing, so you can have whatever view you want on data)

- Output format (how do you feed it back into the platform)

- Integration with existing platform

2. Propose an algorithm:

- What are the minimal required inputs to do useful credit assessment of a company?

- What input sources and collection methods can be utilized apart from our internal data?

- What is the core algorithm? How easy is it to extend it?

3. Implement a minimalistic version of the algorithm

- Use whatever dummy data you want

- Preferably use python

Remember to document your assumptions, decisions and the reasoning behind them. It's fine not to finish all of it. Consider what can reasonably be done in the time given for this challenge. You may focus more on the parts you are most interested in, but also consider providing reply to the other parts, since they are all required for the role you are applying.