



SYNTHERION

Syntherion is a startup initiated at **ETH Zurich** based on a project sponsored by a **Swiss Cantonal Bank** that bridges state-of-the-art research in the fields of Finance and Machine Learning (ML) with challenges in risk management functions in banks and beyond. The mission is to develop a software based on original research and apply it to medium-sized banks to address growing pain points regarding stress tests¹. If the proof of concept with the cantonal bank is achieved, the goal is to roll out the product and approach other players in the financial market.

To enable the Syntherion team to present a first minimum viable product, we are looking for a **GUI developer and designer**.

Activities

Developing **custom components, visualizations** and **interactive control elements** e.g. drag drop graphics, would take center stage. The contributions would happen between **May and June 2019**, i.e. 2 months of involvement with the possibility of extension. Details and the exact scope of work are up to discussions with Syntherion's technical cofounder Igor.

Requirements

- All of the GUI work happens in Qt5, using QtCreator, CMake as a build system and C++17
- Experience in visualization
- REPL/terminal building and in building data management GUIs is valuable
- For the Spec work, experience in defining configuration/description (TOML, Dhall) languages is useful, and experience with sqlite will speed up the work on the project/data management side
- For the report generation, experience with Latex/CSS is nice to have
- Ability to work independently, team spirit, commitment, high motivation

¹ Stress testing has been a much-favored simulation method by banks and their regulators. In general, it is about analyzing the ability of a financial institution to withstand crisis situations in hypothetical scenarios. Such scenarios that, for example, presume a peak of at least 10% in unemployment, a sharp decline in housing prices, or a severe recession in the euro area, are simulated using complex computer software and the subject of evaluation is always the bank's balance sheet or the impact on its trading/capital positions and investments.

Benefits

- Competitive remuneration
- Becoming part of a strong team with highly complimentary skills at ETHZ and EPFL
- Autonomy, flexibility and responsibility in an entrepreneurial setting
- Very impactful endeavor: direct economic impact -> optimize risk-return ratios, we interviewed a high number of experts and checked with them the business potential; social impact: make banks safer
- Project is supported by SNF, Venture Lab and Innosuisse

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