

equation

EQUITY INNOVATION

IDP: Building the private markets intelligence platform

In Cooperation with the Chair of Entrepreneurial Finance, TU Munich

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Who we are

At equation, we view innovation in private capital markets as vital for progress and improvement of society. We envision a world where the ultimate sources of capital support compelling ideas, where private market investors can make informed investment decisions, where data establishes insight and artificial intelligence augments the human mind.

Our mission is to build a data and intelligence pool of private capital markets to enable superior investments and to propel innovation. We use data and statistical methods to generate empirical evidence through observation and documentation of patterns, by experimentation and rigorous analysis. We strive to create tools that empower the investors of capital, enhance their workflows, and automate key elements of their investment processes.

1. Program Structure

The program consists of **4 different phases** and runs for **4 months**.

1. **Onboarding and conceptualization** (3 weeks)
2. **Development, iteration and testing** (8 weeks)
3. **Implementation, deployment and optimization** (3 weeks)
4. **Handover and documentation** (2 weeks)

2. Topics

There are **3 possible topics** for the upcoming summer term that can be worked on during the program:

1) European Ecosystem Analytics

The choice of a company (or firm) to invest in is driven not only by its intrinsic characteristics, but also by macro-economic factors that may contribute to its growth. Two companies with a similar profile (business proposition, team, etc.) may have different growth prospects depending on where (and when) they operate. The purpose of this project is to create an analytics dashboard that will support the investment team developing insights on the ecosystem in which European companies operate, thus aiding the expansion of our investment efforts beyond the German borders.

To achieve this goal, the internal database on European companies and investment firms will be integrated with public data sources and displayed on a dynamic dashboard. The tool will track the most important KPIs and also display the key insights coming from the data, allowing for filtering and continuous updating.

2) Topic modelling of investment firm descriptions

Sourcing companies on our platform based on the properties of their business (e.g., sector, product type, and customer type) is currently achieved via the company category labels provided by Crunchbase. In the case of investment firms, however, such categories are not present. Such information is however contained in many cases within the descriptions associated to each firm. By applying topic modelling techniques to these texts, we are interested in the possibility of extracting a potential categorization in a data driven way. The resulting labels would be then integrated in our platform for sourcing purposes.

Additionally, the application of the same methods to the company descriptions may also inform us of the presence of dimensions that are not captured by Crunchbase's labels. If not complementary to the company categories, the experiment may provide us with a validation of Crunchbase's labels, justifying their use in guiding the sourcing.

3) Investment Firm Social Network Analysis

Early-stage ventures are characterized by a lack of performance information. Identifying a potentially successful firm has thus to rely on the assessment of the qualities of its manager(s). Beyond personal characteristics, one of these qualities is determined by social capital, that is, the interconnectedness of the manager with other players in the ecosystem. By leveraging the information contained on social media (e.g., who is friends with or follows whom) it would be possible to construct a network of social relationships. Then, with the aid of graph theory, the network may reveal insightful quantitative information about social capital to associate each firm with. Such indicator would contribute to driving the sourcing of the most promising new ventures.

3. Your Profile

- You are a Master student in *Informatics* (or similar) having to complete an Interdisciplinary Project (IDP) or Application Project
- You have collected experience in software or data engineering and building applications
- You are reliable, eager to learn and able to structure your work on your own
- You write well-structured and carefully-tested code

Tech Stack

- You have a first experience with frontend frameworks such as Vue.JS or React
- You have foundational knowledge in object-oriented programming languages such as Python or Go
- You have basic understanding of SQL and NoSQL data bases
- Experience in application deployment (Docker) is a plus

4. What we offer

- Welcoming atmosphere in a central office in Munich (Schellingstraße) within a motivated and international team
- Interdisciplinary setup with the possibility to exchange knowledge with renowned industry professionals for continuous personal development
- An open company culture to take on challenging projects at the intersection of research, data science / engineering and the investment world
- Large emphasis on autonomy and enablement with room to create and innovate
- A possibility to join the team as working student or full time employee after the IDP
- Certificate of completion

5. Administrative

- The IDP for the summer term 2022 starts as soon as possible
- Your IDP is supervised by the Chair of Entrepreneurial Finance (TUM School of Management)
- The practical part is accompanied by **theoretical part scoped around Venture Capital and Private Equity** courses
- Your final grade is composed of theoretical and practical part. The practical part is evaluated phase by phase and has the most impact on the final grade.

6. Application

- Applications can be submitted **until May 15th**
- Applications are possible as **team or individuals**
- Send your **CV(s), Transcript of Record(s), GitHub, LinkedIn, previous experiences** and any **questions** you might have to matthias@equationcap.com