**Internship proposal: “Understanding social motivations and success factors of crowdfunding via data analysis”**

CentraleSupélec is hiring a M2 intern in computer science, in preparation of a PhD to be launched in October 2023. The candidate will join the research team of the French national research program (ANR) UMICROWD (Understanding, Modeling and Improving the outcome of Crowdfunding campaigns). UMICROWD gathers experts in economy, sociology, mathematics and data science for studying the dynamics of crowdfunding and promoting sustainable and socially responsible project funding. The candidate will be hired by CentraleSupélec / L2S laboratory (Paris Saclay campus) and will work closely with the ESCE business school (Paris La Défense) and Avignon Université (Avignon) researchers.

**Context:**

Crowdfunding (CF) allows entrepreneurs who are willing to overcome classical funding channels such as venture capital and credit loans to address directly the crowd via Internet-based Crowdfunding Platforms (CFP). Crowdfunding started as a niche but gained increasingly in importance in the past ten years and its social and economic impacts can no longer be neglected.

While the literature on crowdfunding is already rich, the dynamics of fund collection on CFP is not yet well understood. [Cordova15] and [Colombo15] observe that CF has reinforcement characteristic in the sense that contributions generate additional contributions. [Salahaldin22] showed that there are pivotal moments at which a small additional amount of funding may have a large impact on the success of a campaign. [Belleflamme15] compares two forms of CF, reward-based and equity-based, and shows that the choice made by the entrepreneur to select between these two forms depends essentially on the amount of required capital and that equity-based CF is more suitable for large projects. In general, a big goal is negatively correlated with success [Negrao21]. [Mollick14] shows that the quality signals of the campaign page are also success factors. [Jiang20] found that soft information, extracted from descriptive text, contributes greatly to crowdfunding success. In [Xie19], the authors empirically assessed the effect of CF success factors using a large sample (N = 5128) collected from Taobao.com, a leading crowdfunding platform in China. Results reveal that dynamics of a crowdfunding market are rather complex.

Based on the empirical observation of project parameters, works in the literature attempted to model CF dynamics and predict success. [Etter13] developed an algorithm that predicts the success of a project starting from a few days after its campaign launch, based on a big data analysis.

**Objectives:**

The objective of this internship is to understand empirically the dynamics and success factors of crowdfunding campaigns, following a quantitative approach. The candidate will perform a quantitative analysis of a database extracted from a crowdfunding platform to understand the impact of the project parameters (goal, duration, category, promotion by the platform) on the outcome of the CF campaign (success and amount of collected funds). We will make use of the classical statistical tools such as correlation and multivariate analysis, for conducting an exploratory data analysis (EDA) of the corpus. We will also construct the underlying graph describing the interaction between funders and entrepreneurs and describe the impact of the internal social capital of the entrepreneur on the success, using graph analysis tools.

**Candidate profile:**

The candidate is following an M2 in computer science/data science. He/she has a large motivation for pursuing research and working on data analytics and an experience using data analysis tools.

**Applications:**

The application file should be sent by email before December 31, 2022 to:

* Salah El Ayoubi, Professor, CentraleSupélec and L2S : salaheddine.elayoubi@centralesupelec.fr

The file (a pdf) must include:

* A cover letter
* A detailed CV
* And any documents that attest previous experience

**References:**

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[Etter13] Etter, V., Grossglauser, M., & Thiran, P. (2013). Launch hard or go home! Predicting the success of Kickstarter campaigns. First ACM conference on Online social networks (pp. 177-182).

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