Motivation letter for application as „Associate Research Scientist in Natural Language Processing" at the UKP-Lab in TU-Darmstadt

Johannes Stegmüller

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1 Motivation letter

Dear Sir or Madam,

recently i completed a DFG-project in the University of Mannheim, which was partly about recognizing and categorizing text-data from a yearly published book called „Aktienführer ". I would like to continue the path of working in the scientific field and considered beforehand in what topic i possibly dedicate some future years. That's why i thought on the big picture and society as a whole, to come to a conclusion what can be a personal important question to answer which is also compoundable to my current set of skills. Here's my personal thoughts.

Human society was always changing. Since the last changes like practically open borders, English as common language and other transformations coming with globalization there is lot's of influence on the humans as individuals. Compared to living in relatively fixed communities of villages, there's a higher count of choices in living the people have to make on a big scale. Moving is very common nowadays, whether it be within the country or international, having the possibility to change the location to nearly everywhere, also gives lot's of new choices in the way of living. By just looking on the reduced amount of choices an individual could do, life was easier days before globalization.

Collectivistic aspects of society like extended families with a common family-run-business are more and more declining. Overall the mentality of people changes more and more to individualism and self-determination. In large cities the population is very heterogeneous from way of living, job choice, country of origin and approach to life. Cohabitation which is not only based on the verbal exchange of opinion, but on the implementation of joint goals requires a common foundation in people, in example similarities in personality.

In bigger cities the population is constantly changing, often people coming for a certain job or education and then move to another location when it's done. Formation in groups is often temporarily and more individualistic, the groups that exist are effective in terms of one common purpose, but not like a community as a whole. Each individual in the society is on a balancing act between self-determination and being part of a collective. Self-determination is not solving by completely going the path as an individual, but at some point finding people with similarities in which individual goals and way of living are very likely to be community attributes. The key question here are, what the common foundation for such groups can be, how to determine which similarity is suited best for working communities.

Through advanced technology and methods in computing and sociology individuals and communities can be recognized very well. With this progress, the above questions can be solved. The questions are very universal and therefore step by step efforts can be made.

The understanding an systematic evaluation of human language and furthermore communication can give lot's of information for solving above questions. In example language habits and properties could identify patterns in individuals and provide basic, empirical and non-reactive data for a personality recognition systems. Augmented with other data, i.e. from surveys or web-profiles of individuals, personality profiles can be created, which help to find commonalities in persons within working groups. This is merely an example how language processing and above questions could be combined. A more detailed universal approach can be also found in the enclosed expose.
For getting to know the topic and having a first bench of tools i developed a software which is about lexical hypothesis in personality psychology. The software also utilizes basic natural language processing methods like part of speech tagging and lemmatization. It is open source and has been released under GNU-GPL. It can be found here:

<center>https://github.com/Hyper-Node/SocialDataExperiments</center>

I would be glad to introduce myself personally and looking forward to find a solution to combine the position as an associate researcher with a dissertation topic, which also could in addition hosted by another institute. I think on a long run, both components will be mutually supportive and drive research work forward.