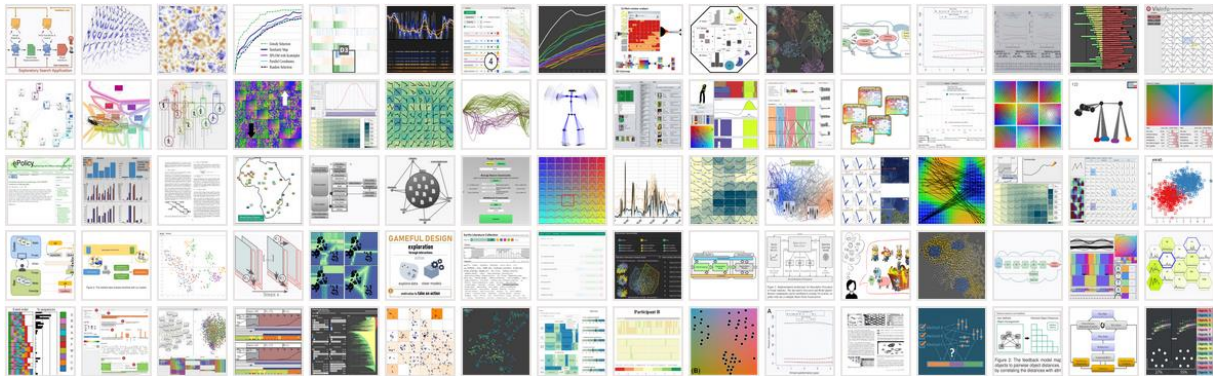


Fulltime PhD Position in Human-Centered Interactive Visual Data Analysis

We are looking for a motivated research assistant (m/f/d) in the areas of visual analytics, interactive data science, and interactive machine learning for a PhD project in the Interactive Visual Data Analysis Group at the University of Zurich (UZH) (ifi.uzh.ch/en.html). Together, we will develop new approaches for characterization, design, and evaluation of interactive visual interfaces to combine the strengths of both humans and algorithms in interactive machine learning and data science applications. The position is available with the possibility to develop a PhD thesis in Computer Science at UZH.



Research Context

The primary research focus will be at the intersection between Information Visualization, Visual Analytics, Human-Computer Interaction, and Machine Learning. The PhD project will follow a human-centered approach to data science, in order to foster the involvement of humans in the data analysis process with interactive visual interfaces. Research will be on the combination of the strength of humans and machines in an iterative and incremental data analysis process in order to tackle remaining data science challenges. Examples for data-oriented challenges are heterogeneous data, dirty data, uncertain data, or unlabeled data. Important model-oriented challenges include data preprocessing, model building, model quality assessment, or model explanation. Particularly interesting user-oriented challenges are different degrees of user expertise, users' personalization intents, and understanding and supporting user preferences with respect to data and tasks. The contributions of the PhD project will include human-centered data science solutions tailored to the information need of individual users. These new approaches will also make machine learning applicable to larger user groups, beyond experts in data science. The program is not bound to a single application domain; rather the candidate may collaborate with experts of different domains in the context of data science and digitalization initiatives.

List of Requirements

- Master degree in computer science or comparable subject from a recognized university
- Knowledge in information visualization, visual analytics, machine learning, data mining, information retrieval, or related data science fields.
- Expertise with methods such as classification, regression, clustering, dimensionality reduction, similarity search, or recommender systems.
- Very good math skills and experience in programming (Python, Java, etc.), as well as a willingness and ability to utilize existing code bases.
- Practical experience with frameworks for the design of interactive data visualizations.
- Knowledge of user-centered design, design study methods, and evaluation methods
- Interest to work on applied research questions in a collaborative research environment.
- Work effectively with students, faculty, and staff from all backgrounds.

Position Details and Working Environment

The open position is for a research assistantship in a PhD program in computer science. The main goal of the PhD project is to conduct excellent research, to publish results in top international journals and conferences, and to work towards achieving a PhD degree through the writing and defense of a doctoral dissertation. The activities of the position also include continuing education for the PhD candidate, but also teaching and administrative tasks. Our research group offers a creative working atmosphere in a motivated, cooperative, and technically very well equipped environment. We offer excellent professional and personal development possibilities. The working environment supports both scientific and applied training of the researcher and hence, provides an excellent basis for a future career in interactive visual data analysis in an industrial context. Start date is estimated for first half of 2021 but subject to the successful evaluation of candidates, duration is expected to be 3 to 5 years.

University of Zurich and Workplace

The UZH is a top internationally recognized research university with faculties in medicine, humanities, economics as well as mathematical and natural sciences. UZH is the largest university in Switzerland and regularly ranked among the top world leading research universities, e.g., according to the Academic Ranking of World Universities by Shanghai Jiao Tong University. The Department of Computer Science (Institut für Informatik – IfI) covers major computer science, software engineering and information management research and teaching topics, it offers BSc, MSc as well as PhD degrees in informatics/computer science.

The Interactive Visual Data Analysis Group is located at the IfI, in the vibrant city of Zurich as part of the University's new Nord-Campus in Oerlikon in a renovated modern office building. The UZH Nord-Campus is conveniently located a short walk off the Max-Bill Platz, center of the new trendy living, shopping and business district in Oerlikon, as well as near the Oerlikon train, S-Bahn and tram stations. The Zurich international airport (ZRH) is easily reachable with public or private transportation.

Benefits

PhD students are remunerated according to local university regulations and standards from the funding agencies. Appointments will be made with respects to standard University rules; same applies for fringe benefits and vacation days. Appointments are expected to involve a full-time effort in research, teaching, and administration. It is the goal of UZH to offer an equal opportunity workplace environment and as part of this, we especially encourage women to apply. Specific benefits include flexible working hours, young scientist promotion opportunities, parental leave benefits, nursery services, and care for dependents and much more.

How to Apply

Applications must include a detailed CV, information of university level educational background, brief description of practical work and research experience in computer science, clear exposition of prior data visualization experience, as well as a short statement of motivation and goals. Certified copies of transcripts, degrees and reference letters may eventually be required for admission to the PhD program.

Please send your application via email to: Prof. Jürgen Bernard, bernard@ifi.uzh.ch. Prof. Bernard will also take further questions if appropriate. Candidates are also recommended to visit Prof. Bernard's research website to get an idea of the research directions of interactive visual data analysis at <http://juergen-bernard.de/>.

Contact

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