The University of Vienna (20 faculties and centres, 178 fields of study, approx. 9.800 members of staff, about 90.000 students) seeks to fill the position as soon as possible of a

Scientific project staff
at the Research Group Data Mining & Machine Learning
at the Faculty of Computer Science, University of Vienna
under the supervision of Prof. Nils Kriege

Reference number: “#01 PC2: Data Mining & Machine Learning, Prof. Kriege”

The Faculty of Computer Science of the University of Vienna has world-leading researchers in Computer Science who pursue basic as well as applied research. The UniVie Doctoral School Computer Science (DoCS) builds an essential framework to foster excellence in research and teaching. Its main focus are young prospective researchers eager to make an impact on both basic research as well as applied problems with collaborations across the University and beyond. The DoCS aims to provide these young researchers with the broad knowledge and expertise needed to perform Computer Science research at the highest achievable quality. The Doctoral School trains doctoral candidates in solving basic as well as applied research questions of high relevance.

This position is assigned to the Work Group Machine Learning with Graphs. Graphs and networks are ubiquitous in various domains from chem- and bioinformatics to computer vision and social network analysis. Machine learning with graphs aims at exploiting the potential of the growing amount of structured data in all these areas to automate, accelerate and improve decision making. Analysing graph data requires solving problems at the boundaries of machine learning, graph theory, and algorithmics. [https://dm.cs.univie.ac.at/mlg/](https://dm.cs.univie.ac.at/mlg/)

You will be working on the project *Algorithmic Data Science for Computational Drug Discovery* funded by the WWTF.

**Duration of employment:** 4 years (The employment relationship is initially limited to 1.5 years. In case of probation and appropriate work progress an extension to 4 years is possible.)

**Extent of employment:** 30.0 hours/week

**Job grading in accordance with collective bargaining agreement:** §48 VwGr. B1 Grundstufe (praedoc) with relevant work experience determining the assignment to a particular salary grade.

**Job description**

Participation in research and administration:
- Participation in research projects / research studies
- Participation in publications / academic articles / presentations
- We expect the successful candidate to sign a doctoral thesis agreement within 12-18 months.
- Involvement in the organisation of meetings, conferences, symposiums
- Involvement in the department administration as well as in teaching and research administration

The research should focus on Graph Neural Networks. We will develop new theoretically founded neural methods overcoming the limitations of the current state-of-the-art, e.g., regarding expressivity, generalisation, interpretability, and scalability. The research is
motivated by tasks from computational drug discovery and embedded in an interdisciplinary collaboration.

Profile
- Strong background in machine learning
- Knowledge on graph theory
- Strong implementation and programming skills
- Experience with machine learning libraries
- Experience with PyTorch Geometric or willingness to acquire
- Interest in exploring trade-offs between computational cost and classical performance metrics in machine learning
- High ability to express yourself both orally and in writing
- Excellent command of written and spoken English
- Ability to work in a team

Desirable qualifications are
- Knowledge in cheminformatics or pharmaceutical chemistry
- Knowledge of university processes and structures
- Experience abroad
- Basic experience in research methods and academic writing

Application documents
- Curriculum vitae
- Letter of Motivation including ideas for a prospective doctoral project proposal
- Abstract of master thesis
- Degree certificates
- List of publications, evidence of teaching experience (if available)

For further information please contact Prof. Nils Kriege +43 1 4277 79512

Applications should be submitted via the recruiting tool Apply@DoCS | Servicedesk Universität Wien (univie.ac.at), no later than 20.12.2021, mentioning reference number “#01 PC2: Data Mining & Machine Learning, Prof. Kriege”.

The University pursues a non-discriminatory employment policy and values equal opportunities, as well as diversity (http://diversity.univie.ac.at/). The University lays special emphasis on increasing the number of women in senior and in academic positions. Given equal qualifications, preference will be given to female applicants.

The candidate who is selected for this position joins the DoCS as doctoral student member.