The University of Veterinary Medicine, Vienna is active in teaching and research and provides services in connection with ensuring animal health in Austria. These tasks represent our contribution to maintaining the health of humans and their animal companions as well as to producing healthy food.

The Clinical Unit of Anesthesiology and Perioperative Intensive-Care Medicine (Department/Hospital for Companion Animals and Horses) and The Precision Livestock Farming HUB (Institute of Animal Welfare Science, Department for Farm Animals and Veterinary Public Health) are looking for a

**PhD student in image analysis for behaviour and pain detection in horses**

**Grade:** B1  
**Level of employment:** 30 hours  
**Length of employment:** 3 years  
**Deadline for applications:** 31.10.2020  
**Start:** 01.01.2021

The Vetmeduni Vienna, ranked 5th worldwide (2019 Shanghai Ranking for Universities, Veterinary Sciences) and located in Vienna, consistently ranking as one of the most livable cities in the world.

The PhD-program is a strong cooperation between the Clinic of Anaesthesiology and Perioperative Intensive Care and the PLF HUB. The research of PLF HUB focuses on assisting the management of animals by continuous, automated, real-time monitoring of production/reproduction, health and welfare, hence integrating a bioengineering approach to human-animal interactions with broad applications and benefits. This PhD position is organised in collaboration between the PLF HUB, the Clinical Unit of Anaesthesiology and Perioperative Intensive-Care Medicine of the Vetmeduni Vienna and M3-BIORES (Measure, Model, Manage Bioresponses), KU Leuven, Belgium.

**Responsibilities**

This PhD project is focused on development of automated methods for image based monitoring of pain in horses. The project will have several phases. In the first phase, the focus will be on a post hoc investigation of videos to develop an algorithm for automated classification of horse behaviour. This will allow establishing the technological foundation and will help to acquire basic knowledge about the influence of pain on behaviour. In a further step, an algorithm for real-time pain assessment will be developed. In the final step, the algorithm will be developed into a tool that can be used under clinical conditions. The potential of real-time application of the tool for everyday use at the clinic will be further investigated.

The candidate should be motivated, independent and reliable. The project is ideally suited for students with a strong quantitative background in computer science, engineering, or the physical sciences who has a passion to do high level applied research in a very engaged and ambitious research team. The project will combine behavioural observations on animals, analysis of dynamic variation of sensor signals, algorithm development and algorithm validation. The work will be conducted in English or German language. The starting date is negotiable.

Please submit to the email address listed below a letter addressing the selection criteria (necessary knowledge and qualifications, desired skills and abilities) in 2 to 3 pages, a full CV, a
list of two references, and a letter of motivation describing your research interests, experience and goals.

**Necessary knowledge and qualifications**

- A Master degree in a relevant area of biology, veterinary medicine, computer science, bioengineering, engineering or equivalent degree
- Fluent in English in writing, reading and speaking (B1)
- Interest in data analysis and programming

**Desired skills and abilities**

- Knowledge in computer programming (MATLAB, Python, R)
- Knowledge in behavioural data analysis
- Experience with deep learning frameworks would be a plus
- Scientific publications would be a plus
- Experience with sensor use in biology
- Ability to conduct research relatively independently
- Affinity with horses or other animals, preferably experience in animal handling
- Interest in animal health

**Contact /Further Information**

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https://www.vetmeduni.ac.at/PLF-Hub/

**Minimum salary**

The minimum salary for university staff is regulated by the collective contract and at the level given above amounts to EUR 2,196.80 gross per month (14 times/year). The minimum salary may be increased when previous employment and other salary components are taken into account.

**Applications**

Please submit applications quoting the reference number 2020/0603 via e-mail (preferably) to bewerbungen@vetmeduni.ac.at or by post to the Personnel Department of the University of Veterinary Medicine, Veterinärplatz 1, 1210 Vienna, Austria. Please do not forget to include the reference number or we shall be unable to relate your application to the correct vacancy announcement.

The Vetmeduni Vienna is attempting to increase the proportion of female staff, particularly in senior positions, and in accordance with § 41 of the 2002 Universities Act it is striving to attain a balanced representation of men and women, especially on its scientific staff. Applications from qualified women are thus particularly welcomed. If women are underrepresented (below 50%),
female applicants who are as well qualified as the best qualified male applicants will be given preference, provided that there are no strong reasons for favouring a particular male candidate.

Applicants have no entitlement to reimbursement of any travel or accommodation costs they may incur as a result of the application procedure.

The Vetmeduni Vienna is proud to have been awarded the certificate “hochschuleundfamilie” (career and family). We are thus be especially pleased to receive applications from people with families. Applications from persons with disabilities are similarly welcome.