The BfR independently prepares expert opinions and statements on issues of food, feed and chemical safety and consumer health protection in Germany on the basis of internationally recognised scientific evaluation criteria. It advises the Federal Government and other institutions and interest groups in these areas. The BfR thus makes an important contribution to the protection of human health. You can find information on the remit of the Division here on our homepage.

The following Master thesis is available at the Unit of Epidemiology, Statistics and Exposure Modelling of the Federal Institute for Risk Assessment (BfR) from July 2025:

Master Thesis:

Systematic mapping of methodology applied to animal observational studies with artificial intelligence

The Unit of Epidemiology, Statistics and Exposure Modelling is developing artificial intelligence methods to facilitate and enhance the conduct of systematic reviews. This review is a systematic map to address a critical gap in literature: the lack of systematic characterization of study designs in animal observational research. Currently, no comprehensive information exists on the application of epidemiological study designs in veterinary observational studies. Given the substantial volume of animal observational research, we aim to enhance and semi-automate the data extraction by incorporating Natural Language Processing (NLP) and artificial intelligence approaches.

For more information about the project, please refer to the project proposal here.

Im Geschäftsbereich

Bundesministerium
für Ernährung
und Landwirtschaft

BfR
Bundesinstitut für Risikobewertung

The following tasks are to be worked on:

- Become familiar with systematic reviews and systematic maps
- Manual annotation of veterinary observational studies according to their Population, Exposure, Outcome (PEO) and Study Design
- Become familiar with coding skills on R/Python
- Development and validation of artificial intelligence methods to classify publications according to their PEO and Study Design categories
- Categorizing studies based on their PEO and Study Design with the code you developed
- Writing the first draft of the publication

Your profile

- Currently enrolled in a Master's programme of Epidemiology or Public Health
- Basic knowledge in observational study designs
- Familiarity with concepts of systematic review
- Good Knowledge of written and spoken English
- A motivated and committed approach to work

We offer an interdisciplinary environment and comprehensive support directly within the team in fields of epidemiology, systematic review, machine learning and artificial intelligence.

Application process

This project is intended for publication and aligns with the typical duration of a Master's thesis (6 months).

If you are interested in developing your skills in artificial intelligence within the field of epidemiological research, then please apply by e-mail **(33@bfr.bund.de)** with the subject line **Application for master thesis**. Please attach a short letter of motivation, CV, certificates and references (BSc) and contact details of at least one reference.

Please address any questions to:
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Oneida Baxhia: T +49 30 18412-23311
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You will find more information on our homepage: bfr.bund.de/de/en/working_at_the_bfr

The BfR welcomes applications from people of all nationalities.

The BfR is an innovative scientific institute offering family-friendly working conditions. for which it was awarded the "audit berufundfamilie®" (work and family) certificate. The BfR guarantees equal career opportunities for women and men. In the case of equal suitability, severely disabled applicants will be given preferential consideration and are only required to have a minimum level of physical suitability.