

## Research Assistant Opportunity Casual Position

### Building an Academic Analytics Infrastructure

**Start Date: As soon as possible**

#### Overview:

This position is in the areas of data science and data analytics in the domain of education.

In online learning environments such as Moodle, Blackboard and BrightSpace, instructors and course designers often get little feedback about how students actually interact with and learn in online courses. Most of these learning systems store comprehensive log data associated with students' behaviors and actions. While these data can provide significant insights for instructors and learning designers on how to better support students and how to design better courses, such data is very difficult to access and interpret by instructors and learning designers, and thus very seldom used effectively.

In order to address this limitation, an innovative tool - the Academic Analytics Tool (AAT) - has been created to support course designers and instructors to easily access the huge amount of log data that learning systems store. The tool hosts a variety of features to facilitate course designers' learning about the effectiveness of their courses as well as instructors' learning about student behaviors that impact on learning outcomes.

In this project, we aim at extending the AAT in the following ways:

- Conducting a requirements analysis (with 10 experts to be consulted) to find out which advanced features to add to the AAT and then implementing those features
- Adding a configuration interface to enable users to use Moodle installations that have been customized for specific educational institutions and to facilitate easy upgrading of the AAT to future Moodle versions
- Making the system open source, creating training material, host training sessions and other activities to promote the AAT

We are looking to hire **two research assistants** to join our team. Successful candidates will be working on this project under the supervision of Prof. Sabine Graf. The successful candidates will work with, and directly report to, Dr. Sabine Graf at Athabasca University.



The primary job duties for the research assistants will include:

- Getting familiar with the aims of the project and the functionalities, source code and database structure of the existing tool
- Participating in the requirements analysis phase
- Extending the tool with advanced functionalities and features
- Testing the newly developed functionalities, features and extensions
- Writing documentation
- Helping with creating training material, hosting training sessions (optional) and other activities to promote the AAT

The successful candidates will gain valuable knowledge and skills in the broad areas of data science, data analytics, learning analytics, academic analytics, software development, human computer interaction, and visualization. In addition, successful candidates will acquire hands-on learning and research skills through participating in conducting requirement analysis, the development of an open-source software product and the international dissemination of such research product. They will also gain experience in team work as well as communicating with diverse audiences, including other academics and team members. In addition, they will get familiar with working in a research environment and presenting significant achievements to team members, other students and academics. All skills acquired will be professionally transferable.

### **Qualifications:**

- Very good programming skills
- Experience in PHP, web development and databases
- Familiarity with learning management systems and especially with Moodle would be an asset
- Good communication skills
- Ability to work independently and reliably, as well as ability to work within a team
- Spending at least 15-20 hours per week for working on this project

Amount of hours: 200 hours (with possibility of extension for up to October 2024)

Location: The position can be done remotely from anywhere in Canada.

We are looking particularly for people who would like to join the research team for a longer period of time to help complete the project. This position is also a good opportunity to get involved in research activities and might later lead to your MSc essay, project or thesis topic or undergraduate project topic.

### **How to apply:**

Qualified individuals are encouraged to submit their application by email to Dr. Sabine Graf ([sabineg@athabascau.ca](mailto:sabineg@athabascau.ca)). Applications should include:

- a cover letter that summarizes your skills, interests and experience



- a current resume or curriculum vitae
- an unofficial copy of your transcript, and
- the contact information for 2 references

Please submit your complete application latest by **June 18, 2023**, which is the date when we will start to evaluate applications. The call will be kept open until successful candidates are found.

All applicants are thanked for their interest in this position; however, only candidates selected for an interview will be contacted.

Athabasca University and the researchers are committed and seek to support equity in employment and research opportunities. We strongly encourage applications from Indigenous people, people of colour, people with disabilities, 2SLGBTQ+ people, women, and other historically marginalized groups. Applicants are welcome, but not required, to self-identify in their letter of application.

For more information on this Research Assistant Opportunity, please contact Dr. Sabine Graf at [sabineg@athabascau.ca](mailto:sabineg@athabascau.ca).