Athabasca University
RESEARCH CENTRE

The future of learning.

Research Assistant Opportunity
Casual Position

OMEGA+: An online game to improve learning skills

Start Date: as soon as possible

Overview:

This position is in the areas of game-based learning, software development, game development, data science and data analytics in the domain of education.

While Canada and many other countries are doing well in producing people with university, college and trade credentials, the actual skill levels in key areas like critical thinking, problem-solving, innovation, etc. are underwhelming. Those skill deficits limit people's potentials and their contributions to their employers, thus, having a negative impact on the economy overall. OMEGA+ is an educational game that aims at addressing this issue by providing a gaming-environment where players can have fun playing a set of subgames against each other while at the same time learning important live skills. Each subgame focuses on implicitly improving particular meta-cognitive skills such as problem-solving, associative reasoning, evaluation and accuracy as well as planning and organization. The game utilizes motivational techniques to encourage users to keep playing, learning analytics to increase users' awareness of their skills and progress, and personalized gaming experiences to particular users and their preferences/skills. The game will be launched shortly as a desktop and mobile version and within one year, we anticipate at least 1000 users increasing their meta-cognitive skills by at least 25%. Such improved skills will boost users' learning capacities, whether at university or on the job, and will enable them to reach their full potential.

Our next steps in this project are:

- After the launch of the game, monitor the game and its performance
- Improve the game with additional features and fix bugs if any are reported by users
- Analyse user survey results and user behaviour in the game to understand how users play and how to further improve the game

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

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The primary job duties for the research assistants will include:

- Getting familiar with OMEGA+, the aim of the project and the functionalities, source code and database structure of the game
- Fixing bugs as they are reported and given their priority level
- Improving mobile interfaces if required
- Helping with analysis of survey data and user behaviour to better understand how users play OMEGA+ and how to improve it
- If time permits, working on new game features to improve the game

The successful candidate will gain valuable knowledge and skills in the broad areas of game-based learning, software development, game development, data science, data analytics, learning analytics, academic analytics, human computer interaction, and mobile computing. In addition, successful candidate will acquire hands-on learning and research skills through participating in monitoring the use and performance of a research software product, analysing results from surveys and log data to better understand the use of the software product, developing new features to improve the product and disseminating the product as well as research findings at international conferences and/or journals. 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:

- Enrollment in an undergraduate or graduate program in Computing and Information Systems, Computer Science, Information Systems or a related field
- Strong programming skills (e.g., Java, C++, Python, etc.) and/or strong web programming skills (e.g., PHP, Javascript, etc.)
- Experience in mobile web development (i.e., hybrid mobile app development and cross platform app development) would be an asset
- Experience in responsive web development would be an asset
- Good communication skills
- Ability to work independently and reliably, as well as ability to work within a team
- Spending about 15-20 hours per week for working on this project

Amount of hours: 200 hours (with possibility of extension)
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 the project grow. 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) and Dr. Maiga Chang (maigac@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 transcripts, 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 a successful candidate is 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.