Postdoctoral Position

Machine Learning: Lifelong Streaming Anomaly Detection

Department of Computer Science

American University

Supervisors: Nathalie Japkowicz (CS), Roberto Corizzo (CS), Michael Baron (Statistics)

Description of the Work:

This work will take place in the context of DARPA’s L2M program (www.darpa.mil/program/lifelong-learning-machines). The successful candidate will expand American University team’s Lifelong Learning model. This work will be carried on in collaboration with Computer Science professors Nathalie Japkowicz and Roberto Corizzo and Statistics professor Michael Baron. The work will combine deep learning methods with other machine learning, statistical and AI techniques. The resulting system will be integrated to the work of other teams in the L2M program.

Requirements:

The ideal candidate will hold a Ph.D. in Computer Science, Statistics, Applied Mathematics, Data Science, Computer Engineering or other related areas and will have substantial experience in Deep Learning. Experience in Deep Learning is necessary while experience in other machine learning areas such as reinforcement learning, unsupervised or one-class learning, outlier detection, time-series analysis, and data stream learning techniques are an added bonus. The candidate will have a record of publications in well-recognized conference and/or journal venues.

The principal duties to be carried out include:

- Integration of the current American University (AU) team’s Lifelong Learning approach with SRI International’s approach to the Starcraft application.
- Helping in the design and implementation of the new components of AU team’s approach.
- Adapting the approach to the various domains of application considered by the team.
- Thoroughly evaluating the performance of the system on these domains.
- Co-supervising Senior or Master’s students’ implementations (with testing and refinement) of sub-components or specific applications of the project.
- Preparing conference and journal manuscripts in collaboration with Drs. Japkowicz, Corizzo, and Baron and the students involved in the projects.
• Assisting in the preparation of additional grant proposals to continue the project or develop new ideas emanating from the project.

Location

The successful candidate will be affiliated with the Department of Computer Science at American University in Washington, DC. The candidate will be working with Professors Nathalie Japkowicz, Roberto Corizzo, and other students affiliated with the lab. The candidate will also be working with Professor Michael Baron in the Statistics department.

Length

The appointment is a 12-month term position (renewable for 12 months pending successful completion of the work and funding) and will commence on January 4, 2021.

Submitting an Application

Salary is competitive. Review of applications will begin immediately and will continue until December 1st, 2020 or until the position is filled, subject to ongoing budgetary approval. Please submit applications via: http://apply.interfolio.com/79810. Include a letter of application, curriculum vita, three letters of recommendation, and copies of recent published papers or working papers. Please contact Nathalie Japkowicz, at nathalie.japkowicz@american.edu if you have any questions.

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