Fully funded Postdoc researcher (m/f/d) position: Architectural Applications for Machine Learning

24.4.2023

Technion's CD_ML is looking for a highly motivated Postdoc to join our growing research team. We have a fully funded Postdoc position researching **Architectural Applications for Machine Learning** available, starting October 2023. The successful candidate will head one of the labs' current ML projects, on the urban, building or fabrication scale.

About the lab:
The **Computational Design & Machine Learning** lab - https://cdml.net.technion.ac.il/ is an international research group founded of graduate, PhDs, and postdoc members. The lab's goal is to solve problems of architectural design and fabrication using state of the art Machine Learning methods. as well as to state-of-the-art CAM facilities in the Architecture Faculty. Our current research focuses on applying ML models in different scales:

- Applying GNNs on graph data derived from BIM datasets.
- Vision models for analysing urban environment.
- Reverse engineering of fabrication information from design models.

Our past projects include:
- Using ML vision to read architectural drawings.
- Using cGANs to generate architectural designs.
- Rationalization of complex façade panels.
- Optimization of security design.

About the Position:

Skills/Requirements:
- PhD in a relevant field (Architecture, Urbanism, Computer Science)
- Excellent Python coding skills.
- Proficiency in using ML for solving architectural problems.
- Excellent teamwork and communication skills.
- Scientific writing skills demonstrated through peer-reviewed publications.

Responsibilities:
- Lead research and publication efforts of one of the lab's ML projects under the direction of the PI. At least one paper will be published during the Postdoc period.
- Assist in the preparation of proposals, grants and reports.
- Solve research challenges, assisting PhD and Master students where needed.

- Actively participate in the lab's community, events, and culture.

Perks:
- Fully funded position, help with securing additional post-doc funding from relevant foundations.
- Free access to the Technion's High Powered Computing centre (https://cis.technion.ac.il/en/HPC/) .
- Unrestricted use of the Architecture faculty's fully equipped fabrication labs, including several Kuka's, Large-scale 3D printers, 3 and 5 axis CNC's, Laser cutters, Knitting machines and more.
- Ample time for personal research in a supportive environment.
- Room to grow, we want you to help shape the nascent lab culture.

Our offer:

We offer an interesting and challenging opportunity in a motivated international research team. The position will be generously funded by the Technion, allowing you to focus on your academic work. The research will be based in the Technion in Haifa, Israel and the position requires physical attendance during the majority of the research period. The Technion – Israel Institute of Technology ranks among the world's top universities, as measured by several key independent rankings. The Technion offers significant support to international researchers through a broad range of scholarships and research travel awards, dedicated office spaces, skills training, and professional development opportunities. The campus is located in the coastal city of Haifa on the Carmel Mountain, offering a unique nature experience and quality of life.

Contact and application:

Severely disabled persons will be given preference in the case of essentially equal suitability and qualifications. The Technion aims to increase the proportion of women in science; applications from women are therefore expressly welcomed.

Please send your application with a short letter of motivation, CV, academic certificates, and a sample of your academic work, as well as the contact details of two references to Dr. Guy Austern (guyaustern@technion.ac.il) **by 01 June 2023**. Please send all documents as a single PDF document.