**TEXT 1**

Dr. Schaumann is an Assistant Professor in the Faculty of Architecture and Town Planning at the Technion, where he directs the Intelligent Place Laboratory. In his lab, Dr. Schaumann conducts research at the intersection of architecture, AI, and human behavior science to solve a fundamental disconnect between buildings, which are static, and the needs of building inhabitants, which are dynamic and continuously evolving. To this end, Dr. Schaumann develops novel AI-powered methods for designing and managing complex buildings, such as healthcare facilities, to improve operational efficiency, space utilization, and people well-being. This research agenda uniquely integrates Dr. Schaumann’s interdisciplinary education in Architecture (BSc and MSc from Politecnico di Milano, PhD from Technion) Computer Science (Postdoc at Rutgers University) and Business/Entrepreneurship (Postdoc at Cornell Tech). Dr. Schaumann published more than 40 papers in established scientific journals and conferences and won a prestigious postdoctoral fellowship as well as 2 best paper awards in leading conferences. At the Technion, Dr. Schaumann is spearheading research and teaching activities on digital modeling in architecture and intelligent environments to solve global challenges such as the design of built environments that are conducive to people’s health and productivity.

**TEXT 2**

**Research Assistant in Human-Building Interaction**

The Intelligent Place Laboratory is offering a funded research assistant position in the field of occupant behavior simulation, smart and responsive environments, Internet of Things (IoT) and Digital Twins beginning in early January 2022. The candidate will take a leading role in a research project under the supervision of Dr. Davide Schaumann.

**Job Description**

The research involves the development of an AI-powered decision-support systems to enable dynamic resource allocation in healthcare facilities. The candidate will spearhead the development of a simulation tool to predict the implication of alternative resource allocation strategies (such as spaces, people, and equipment) and recommend the one that satisfies performance metrics defined in collaboration with hospital partners. The research will be conducted in collaboration with the Rambam Hospital.

**Responsibilities**

* Develop a simulation tool in Python to optimize the dynamic allocation of resources in hospitals
* Data analysis from hospital sensors and IT systems
* Explore ML-based approaches to power the recommendation engine
* Develop a UI for the simulation

**Qualifications**

* Currently enrolled in a BSc or MSc degree in Computer Science, Industrial Engineering, or related disciplines with a specialization in AI and Machine Learning (ML) (or equivalent)
* Experience with Python, and ML frameworks
* Experience with Videogame Engines such as Unity 3D (preferred)
* Curious mind-set with strong research, analytical, and problem-solving skills

**To apply please submit the following documents**

* CV including your education, experience, and other skills relevant for the position
* Example of 1 or 2 projects relevant for the position
* Names and contact details of at least 1 referee from academia and/or the industry

Salary and benefits are consistent with the policy of the Technion and applicant experience. Short-listed candidates will be invited for interview. The position will begin in early January 2022.

For further inquiries, please contact Dr. Davide Schaumann at **d.schaumann@technion.ac.il**

**TEXT 3**

**Teaching Assistant in Human-Building Interaction**

The Intelligent Place Laboratory is offering a Teaching Assistant position for the course “Intelligent Environments”, taught by Dr. Davide Schaumann in March 2022. **The position will start in early February 2022**.

**Course Description**

Buildings have been traditionally considered as static containers in which people’s activities take place. As such, they do not often meet the dynamic and evolving needs of their inhabitants. As buildings become more technology enhanced, they could potentially become aware of – and proactively respond to – the dynamic needs of their inhabitants. However, current modeling approaches only represent static aspects of buildings, without considering the dynamic behavior of their occupants. The course aims at teaching a novel approach for designing, modeling, and simulating dynamic human-building interactions in built environments using autonomous agents in Unity 3D. Students from complementary disciplines (such as Architecture, Computer Science, and Industrial Engineering) will be able to predict, analyze, and recommend intelligent building responses that meet the needs of the building inhabitants.

**Responsibilities**

* Support teaching activities by preparing tutorials and teaching selected topics in Unity3D
* Develop critical code blocks that will be used by students in class
* Support the development of students’ projects and evaluate their progress

**Qualifications**

* Currently enrolled in a BSc or MSc degree in Computer Science, Industrial Engineering, or related disciplines.
* Experience with modeling the behavior of autonomous agents in Unity 3D.
* Experience in scripting using C#
* Curious mind-set with strong analytical and problem-solving skills