



## Postdoctoral Associate Positions

Singapore-MIT Alliance for Research and Technology (SMART) Project: Mens, Manus and Machina (M3S)

*T5. Integrated human-machine intelligence for economic growth*

Massachusetts Institute of Technology

June 2023

### Position Overview

The Singapore-MIT Alliance for Research and Technology (SMART) team is currently seeking highly qualified postdoctoral associates to join them in **late summer or early fall in 2023**. Successful applicants will have the opportunity to work on cutting-edge projects that aim to develop state-of-the-art AI to create future smart cities. This hiring is a position in the **T5 project** of the five-year M3S program for the SMART team. The SMART team seeks to advance the frontier of AI research, apply it to society and cities, and demonstrate the concrete social impacts of the AI algorithms with broad public acceptance in Singapore.

Specifically, the SMART-T5 project seeks to develop innovative machine learning algorithms that nudge human activities to maximize the growth of social capital and economy. The project makes intellectual contributions by synergizing classical network theory and deep learning, with applications to urban mobility networks in cities. This synergy leverages the integrated data sets of micro human mobility (e.g. phone trajectory), social network (e.g. Twitter), transportation infrastructure, and macro socioeconomics, thus connecting the micro-behavioral mechanism to macro-economic development.

The SMART-T5 team is led by distinguished scholars, i.e., Professor Alex "Sandy" Pentland, Professor Jinhua Zhao, and Professor Siqi Zheng from MIT, and Professor Simon Chesterman from National University of Singapore. If you are interested in becoming a part of this team and possess relevant skills and experience, we encourage you to apply for this exciting

opportunity. You can contact Professor Shenhao Wang ([shenhao@mit.edu](mailto:shenhao@mit.edu)) for further information.

The SMART-T5 team will recruit **at least one Postdoctoral Associate**. The candidates will be recruited as MIT postdoctoral associates, who will work primarily in Singapore. For the interested candidates, please apply directly at this [link](#). The review of applications will begin immediately and continue on a rolling basis until the positions are filled. A commitment of at least **2 years** for this appointment is expected. Information on salary and benefits is available [here](#).

### **Qualifications**

- Ph.D. in Computer Science, Artificial Intelligence, Transportation Engineering, Operation Research, Computational Social Science, Network Science, Civil Engineering, Economics, Statistics, Urban Planning, Industrial Engineering, or a related field by the start of the appointment.
- Experience in deep learning, reinforcement learning, statistical modeling, network analysis, and/or optimization.
- Experience in behavioral/economic models, urban mobility, and their integration with AI.
- Strong publication record in top-tier conferences and journals.
- Excellent communication and collaboration skills.

### **Principal Duties and Responsibilities**

- Collaborate with the project team and other researchers to design, implement, and evaluate research projects.
- Publish research results in top-tier conferences and journals, and disseminate research findings through presentations and other means.
- Participate in the mentorship and training of graduate and undergraduate students at MIT and in Singapore.
- Assist in grant writing, project management, and other administrative duties related to research activities.

- Perform other duties as needed.

We value diversity and strongly encourage applications from individuals from all identities and backgrounds. All qualified applicants will receive equitable consideration for employment based on their experience and qualifications, and will not be discriminated against on the basis of race, color, sex, sexual orientation, gender identity, religion, disability, age, genetic information, veteran status, ancestry, or national or ethnic origin.

### **Review Process**

Step 1: Interested candidates can submit an application, with their CV and an optional cover letter, directly at this [link](#). We will continue the hiring process until the position is filled.

Step 2: After an initial screening, shortlisted candidates will be contacted to submit the following documents:

1. A 2-page\* Statement of Research (\*excluding references).
2. One or two published papers/preprints that the candidate deems most representative of their work.
3. A coding sample (GitHub/GitLab or a notebook/markdown format).
4. Three names for the reference letters

Step 3: Finalists will be required to submit three reference letters and invited to give a 20-minute presentation to our research team, followed by a series of 1-on-1 interviews.

Step 4: We will inform the successful candidates soon after all the presentations and interviews.