

6 Pancras Square
London, United Kingdom, N1C 4AG

November 22, 2020

Faculty Search Committee
Department of Brain and Cognitive Sciences
Massachusetts Institute of Technology
Cambridge, MA 02139

Dear Committee Members,

I am delighted to apply for a tenure-track assistant professor position in the Department of Brain and Cognitive Sciences at the Massachusetts Institute of Technology, recently advertised on your website.

I am a staff research scientist at DeepMind, where I lead an effort toward general linguistic intelligence. I received my PhD from the School of Computer Science at Carnegie Mellon University in August 2015. While I have learned a great deal during my time in industry, I have decided to conduct a narrow search for a position in academia where I can contribute to training the next generation of researchers. My research interests are in machine learning and natural language processing. My strength in research is demonstrated by a strong publication record at the most competitive forums in both areas. My teaching experiences show my passion about education.

My work is fully described in my research statement, but I will highlight some of my practical and formal contributions. My goal is to build an artificial agent that is capable of performing multiple linguistic tasks (e.g., question answering, translation, summarization) in multiple languages and uses its experience to continuously improve over time. I endeavor to improve our understanding of natural intelligence in the process. I have made significant advances on this difficult problem on several fronts. For example, my collaborators and I augmented a neural network with an episodic memory module to enable the neural network to accumulate knowledge throughout its lifetime. In another work, we described how to transfer abstractions from a monolingual (e.g., English) model into multiple languages in an unsupervised manner. On the theoretical side, we proposed an information-theoretic framework that unifies models of distributed representations of language. I intend to continue working in these areas and pursue other related directions in the future.

I recognize the importance of undergraduate and graduate education at MIT. I enjoy teaching and I am passionate about increasing diversity in artificial intelligence. At CMU, I served as a teaching assistant for ML and NLP courses. I have also co-presented a tutorial on structured sparsity in natural language processing at one of my field's top conferences. My diversity initiatives include leading the organization of the inaugural Southeast Asia Machine Learning School. My teaching philosophy is described in my teaching statement.

Please expect letters of recommendation from Noah Smith (UW), Chris Dyer (DeepMind/CMU), and Kyunghyun Cho (NYU). Contact details are listed in my CV.

Please contact me if there are any further questions regarding my application. I have great respect for your department and I am excited at the prospect of becoming a part of it.

Sincerely,

Dani Yogatama