Dear Members of the Selection Committee,

I am writing to express my interest in pursuing a postdoctoral position in school of computer science at the IPM. I have completed my PhD in **Artificial Intelligence (Natural language processing)** from the Faculty of Computer Science and Engineering at **Shahid Beheshti University**. I have conducted PhD research on Language-based Abductive and Deductive **Commonsense Reasoning**. We developed **Avicenna**, a transformer-based model for recognizing syllogistic relations between two premises and generating the conclusion sentence. I have led more than 30 freelancers to build the Avicenna dataset (the first dataset to study syllogism in natural language). Our results indicated that the types of human inferences can be taught to modern models with the help of small but rich and artifact-free datasets.

Prior my PhD, I have designed and implemented various data mining projects such as: "Design and implementation of a recommender system to introducing experts in an online forum", "Searching for Invariant in Kernel of OS to Provide an Intrusion Detection System Using Genetic Programming" and "Modeling Sentence Pairs to Recognize Premises of Inference using Deep Learning Techniques".

I am interested in doing research in the field of **NLP for Healthcare**; Especially, I would like to continue a path of research on Cognitive Impairments related to reasoning in the human brain. So, I prepared a pre-proposal entitled "**An NLI-based Cognitive System for Detection of Dementia**". I have also attached my CV. If there is additional information that I have not included that you would like, I would be happy to provide it to you.

Thank you for your consideration.

Zeinab Aghahadi