https://ibm88.github.io/
behrang.mehrparvar@gmail.com
https://www.linkedin.com/in/bmehrparvar/

Behrang Mehrparvar

February 2024

I am passionate about cognitive science and artificial intelligence as a research career. I am very much interested in developing novel ideas, brainstorming, interdisciplinary research, intuitive thinking and fundamental research. I am also very much interested in researching social consciousness, interbrain synchrony, representation of concepts in the brain and AI, associative memories, etc.

As a hobby, I am also interested in contemplating, researching and brainstorming about other topics such as universal consciousness, randomness, synchronicity, quantum physics, Hylomorphismd and theory of forms.

My lifetime goal is to provide scientific solutions for understanding the universal consciousness which leads to global peace and harmony.

CURRENT RESEARCH INTERESTS

- Interbrain synchrony, Synchronicity, Intuition
- Computational cognitive modeling, Analysis of deep neural networks, NLP

SOFT SKILLS

- ***Intuitive thinking*** and ***problem solving***, ***analytical thinking*** and ***critical thinking***
- Strong ***adaptability***, ***teamwork*** and ***leadership*** capabilities
- Passionate about ***interdisciplinary research*** and ***brainstorming*** about novel ideas

HARD SKILLS

- More than 10 years of experience with ***deep neural networks***, ***convolutional neural networks (CNNs)*** and ***recurrent neural networks (RNNs)***
- Experience with generative models including ***transformer-based models*** such as ***T5***
- Experience with machine learning libraries such as ***Keras***, ***TensorFlow***, ***PyTorch***, and ***scikit-learn*** and Python libraries such as ***Pandas*** and ***Numpy***

EDUCATION

University of Amsterdam— *M.Sc. in Brain and Cognitive Sciences*

Sep 2023 - PRESENT, Amsterdam, Netherlands

University of Houston — *Ph.D. in Computer Science*

Sep 2011 - Aug 2017, Houston, USA Grade: 3.80/4.0

Iran University of Science and Technology — *M.Sc. in Computer Engineering (Software)*

Sep 2008 - Jun 2011, Tehran, Iran Grade: 16.68/20.0

RESEARCH EXPERIENCE

University of Amsterdam - Sep 2023 - PRESENT

- Researching on ***Language ambiguity***
- Researching on ***an AI-generated global human language***
- Paper on ***Medical Decision Making for Substance Addicted Patients taking Deep Brain Stimulation***
- Proposal on ***A Gradual Leader-elimination Framework for Interbrain Synchrony Neurofeedback***
- Essay on ***Interaction between Episodic Memory and Information Search for Meaning***

Independent research in AI - Nov 2017 - Sep 2023

- Researching on ***graph extraction from text*** using ***transformer based generative models***
- Researched and developed a new architecture for neural networks using ***shortcut pathways for grandmother cells***

Pattern Analysis Laboratory - Sep 2012 - Aug 2017

Advisor: Dr. R. Vilalta

- Conducted research on ***conceptual domain adaptation using deep learning***
- Conducted research on ***community analysis of deep networks***.

Performance and Dependability Engineering Research Laboratory - Sep 2009 - Jun 201

Advisor: Dr. M. Abdollahi Azgomi

- Researched on ***Model checking techniques for SDES descriptions and their implementation in MCGine model checker***.

PUBLICATIONS

- Mehrparvar, Behrang, and Ricardo Vilalta. "***Conceptual Domain Adaptation Using Deep Learning***." *arXiv preprint arXiv:1808.05355 (2018)*.
- Mehrparvar, Behrang, and Mohammad Abdollahi Azgomi. "***Towards a Multi-Formalism Model Checker Based on SDES Description***." *FCS 2011: proceedings of the 2011 international conference on foundations of computer science (Las Vegas NV, July 18-21, 2011)*. 2011.

TEACHING EXPERIENCE

Department of Computer Science, University of Houston, Houston, US — *Teaching Assistant*

Sep 2011 - Apr 2016

- Advanced Machine Learning, Machine Learning, Artificial Intelligence (Dr. R. Vilalta)
- Introduction to Computer Science I (Dr. N. Rizk)
- Data Structures (Dr. C. Ordonez)

Daneshsar Institute of Higher Education (University of Applied Science and Technology), Tehran, Iran — *Instructor*

Feb 2010 - Sep 2010

- Multimedia and Environments
- Advanced English

INDUSTRY EXPERIENCE

Hamrahe Aval (MCI), Tehran, Iran — *Senior Artificial Intelligence Researcher and Developer*

Nov 2021 - Aug 2023

- Researched and developed intelligent solutions for ***query processing*** based on ***transformer based generative models*** and ***reinforcement learning*** for search engine
- Researched and developed solutions for ***verbose query reduction and expansion*** based on ***semantic similarity graph***, ***semantic factors*** and ***pseudo-feedback*** for search engine
- Developed a novel idea for ***two-step fast spell checker*** based on ***text vectorization***
- Developed ***text vectorization algorithm*** for documents and terms vectorization and ***update cycle*** for search engines

Afagh Company, Tehran, Iran — *Artificial Intelligence Researcher and Developer*

Nov 2017 - Nov 2021

- Researched and developed AI solutions for ***web application security evaluation*** using ***reinforcement learning***, ***genetic algorithm*** and ***generative adversarial networks (GANs)***
- Developed ***security evaluation software*** using ***Python*** and ***Gym API***

REFERENCES

Available upon request. Previous recommendations available on LinkedIn profile.