

# Reza Shami Tanha

## PERSONAL INFORMATION

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Surname	Shami Tanha
Name	Reza
Date and Place of Birth	February 25, 1996; Zanjan, Iran
Nationality	Iranian
Email	reza.sh.tanha.study@gmail.com
Address	Room 123, Department of Computer Science and IT, Institute for Advanced Studies in Basic Sciences (IASBS), 444 Prof. Yousef Sobouti Blvd., Zanjan 45137-66731, Iran
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## SUMMARY

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I am a Master's graduate of computer science from the Institute for Advanced Studies in Basic Sciences (IASBS). I'm researching employing machine learning tools, especially graph neural networks, in bioinformatics problems. I am also researching finding a way for cooperative teamwork among robotic agents and formulating physical phenomena as mathematical models to prepare an acting environment for agents.

## EDUCATION

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<b>Institute for Advanced Studies in Basic Sciences (IASBS).</b>	Zanjan, Iran
MSc in Artificial Intelligence, GPA: 16.72/20.00	2019–2023
– Thesis: “Firefighting by Autonomous UAVs Network using Deep Reinforcement Learning”	
– Supervisors: Dr. Mohsen Afsharchi, Dr. Mohsen Hooshmand	
<b>Institute for Advanced Studies in Basic Sciences (IASBS).</b>	Zanjan, Iran
B.S. in Information Technology (IT), GPA: 15.94/20.00	2014–2018
– Thesis: “Designing and Implementing A Mobile Phone System to Remind when to Take Medicine”	
– Supervisor: Dr. Ebrahim Ansari	

## RESEARCH INTERESTS

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- Machine Learning
- Reinforcement Learning
- Multi Agent Reinforcement Learning
- Graph Neural Networks

## PUBLICATIONS

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- [1] M. Nasrollahi, R. Shami Tanha, and M. Hooshmand, “Lempel-Ziv-based hyper-heuristic solution for longest common subsequence problem”, presented at the 2023 13th International Conference on Computer and Knowledge Engineering (ICCKE), 2023.
- [2] R. Shami Tanha, M. Hooshmand, and M. Afsharchi, “UAV-based firefighting by multi-agent reinforcement learning”, presented at the 2023 13th International Conference on Computer and Knowledge Engineering (ICCKE), 2023.
- [3] R. Shami Tanha, M. Sadighian, A. Zabihian, M. Hooshmand, and M. Afsharchi, “MAD-TI: Meta-path aggregated-graph attention network for drug target interaction prediction”, presented at the 2023 31<sup>st</sup> International Conference on Electrical Engineering (ICEE), 2023.
- [4] A. Zabihian, F. Z. Sayyad, S. M. Hashemi, R. Shami Tanha, M. Hooshmand, and S. Gharaghani, “DEDTI vs IEDTI: Efficient and predictive models of drug-target interactions”, *Scientific Reports*, vol. 13, pp. 1–18, 2023. [Online]. Available: <https://doi.org/10.1038/s41598-023-36438-0>.

## RELEVANT GRADUATE COURSES PASSED

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- **Machine Learning**, 2020
  - Bishop, Christopher M. ( 2006). “Pattern recognition and machine learning”. New York :Springer,
- **Advanced Data Mining**, 2020
  - Han, J., Kamber, M. & Pei, J. (2012). “Data mining concepts and techniques”, third edition Morgan
- **Deep Learning**, 2020
  - Bengio, Y. (2016). “Deep Learning”. MIT Press.
- **Advanced Artificial Intelligence**, 2019
  - Russell S. J. & Norvig P. (2010). “Artificial intelligence : a modern approach (3rd ed.)”. Pearson.
- **Multi Agent Systems**, 2020
  - Wooldridge, M. (2009). “An introduction to multiagent systems”. John wiley & sons.

## EXPERIENCES

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- **Research Assistant** at IASBS, Departemant of Computer Sciences and IT May 2023 - August 2023  
*Supervisor: Dr. Mohsen Hooshmand*
- **Freelancer Website Developer** January 2023 - April 2023  
*Develop and maintain an online questionnaire website, [online.iran.liara.run](https://online.iran.liara.run)*

## TEACHING

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- **Teaching Assistant** at IASBS, Departemant of Computer Sciences and IT Fall 2022  
*Course name: Reinforcement Learning, Teacher: Dr. Mohsen Hooshmand*
- **Teaching Assistant** at IASBS, Departemant of Computer Sciences and IT Winter 2022  
*Course name: Advanced Data Mining, Teacher: Dr. Zahra Narimani*
- **Teaching Assistant** at IASBS, Departemant of Computer Sciences and IT Winter 2021  
*Course name: Multi Agent Systems, Teacher: Dr. Mohsen Afsharchi*
- **Teaching Assistant** at IASBS, Departemant of Computer Sciences and IT Spring 2017  
*Course name: Advanced Programming, Teacher: Dr. Ebrahim Ansari*

- **Teaching Assistant** at IASBS, Departemant of Computer Sciences and IT  
*Course name: Data Structures, Teacher: Dr. Mehdi Khosravian*
- **Teaching Assistant** at IASBS, Departemant of Computer Sciences and IT  
*Course name: Basic Programming, Teacher: Dr. Ebrahim Ansari*

Winter 2016

Fall 2015

## COMPUTER SKILLS

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### Programming languages:

- C++ (expert)
- Python (expert)
- JavaScript (experienced)
- Java (good knowledge)

### Back-End:

- Node.JS (experienced)
- Express.JS (experienced)
- PHP (experienced)
- XAMP (experienced)

### Databases:

- MongoDB (good knowledge)
- MySQL (experienced)

### Operation Systems:

- Linux
- Windows

### Machine Learning and Deep Learning:

- PyTorch, TensorFlow
- NumPy, SciPy, Keras, Pandas
- Matplotlib

### Front-End:

- Html, CSS, JavaScript (experienced)
- Bootstrap (experienced)
- jQuery (experienced)

### Scientific software:

- MATLAB (experienced)

### Others:

- L<sup>A</sup>T<sub>E</sub>X (good knowledge)
- Heroku (good knowledge)
- Git (experienced)
- Express JS and mongoose libraries in Node.JS

## LANGUAGE SKILLS

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- **Persian:** Native
- **Azari:** Native
- **English:** Intermediate

## CONFERENCES AND SEMINARS ATTENDED

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- Computational methods for modelling bionano interactions and nanomaterials functionality workshop (26–28 June 2023, CECAM-IRL-Online), <https://www.cecarn.org/workshop-details/1231>
- 31<sup>st</sup> International Conference on Electrical Engineering (ICEE) (9–11 MAY 2023, Electrical Engineering Department, Amirkabir University of Technology), <https://iceeconfr/2023>
- Fifth IPM Advanced School On Computing & Artificial Intelligence (5–8 SEP 2021, Online)
- PyTorch Workshop (4–7 SEP 2021, Computer Science Department, IASBS)

## INTERESTS AND HOBBIES

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- Reading books
- Traveling

## REFERENCES

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- **Dr. Mohsen Hooshmand**

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran  
Assistant Professor

- Thesis supervisor
- Email: [mohsen.hooshmand@iasbs.ac.ir](mailto:mohsen.hooshmand@iasbs.ac.ir)
- Website: <https://iasbs.ac.ir/~mohsen.hooshmand>

- **Dr. Zahra Narimani**

Institute for Advanced Studies in Basic Sciences (IASBS), Zanjan, Iran  
Assistant Professor

- Email: [narimani@iasbs.ac.ir](mailto:narimani@iasbs.ac.ir)
- Website: <https://iasbs.ac.ir/~narimani>