# **Amir Sartipi**

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### **Education**

**University of Isfahan** Isfahan, Iran

MSc in Software Engineering Sept 2020 - Sept 2023

• **GPA:** 18.94/20

• Thesis: 'Multilingual Complex Named Entity Recognition'

Participated in SemEval 2022 and 2023

• Ranked 1st out of 15 students

**University of Isfahan** Isfahan, Iran

BSc in Software Engineering Sept 2016 - Aug 2020

• **GPA:** 15.54/20

• Thesis: 'Design and implementation of news monitoring system'

• Ranked 14th out of 120 students

### Research Interests \_

Natural Language Processing Deep Learning Machine Learning **Data Mining** Graph Neural Network Artificial Intelligence

# **Publication and Project**

**Publication** Isfahan, Iran

University of Isfahan

Sept 2021 - Current

- Amir Sartipi, Amirreza Sedighin, Afsaneh Fatemi, and Hamidreza Baradaran Kashani. 2023. Sartipisedighin at semeval-2023 task 2: Finegrained named entity recognition with pre-trained contextual language models and data augmentation from wikipedia. In Proceedings of the 17th International Workshop on Semantic Evaluation, pages 565–579, Toronto, Canada. Association for Computational Linguistics.
- · A. Sartipi and A. Fatemi, "Exploring the Potential of Machine Translation for Generating Named Entity Datasets: A Case Study between Persian and English," 2023 9th International Conference on Web Research (ICWR), Tehran, Iran, Islamic Republic of, 2023, pp. 368-372, doi: 10.1109/ICWR57742.2023.10139222.
- Safayani, M., Sartipi, A., Ahmadi, A. H., Jalali, P., Mansouri, A. H., Bisheh-Niasar, M., & Pourbahman, Z. (2023). OPSD: an Offensive Persian Social media Dataset and its baseline evaluations. Manuscript submitted for publication to information retrieval journal (Under review)
- Sartipi, A., Dehghan, M., & Fatemi, A. (2023). An Evaluation of Persian-English Machine Translation Datasets with Transformers. Manuscript submitted for publication to Transactions on Asian and Low-Resource Language Information Processing (Under review)

# Work Experience \_\_

Neuroship Netherlands (Remote) May 2023 - Current

**NLP Engineer** 

• Designed and developed an Enterprise Coding Assistant.

- Collaborated on projects involving Large Language Models.
- Implemented a summarization system for git repositories using Large Language Models (LLMs).
- Utilized open source LLMs, OpenAI, and VertexAI, to enhance project capabilities.
- Facilitated semantic interaction between vector databases and Large Language Models.
- Deployed Large Language Models on Google Cloud Platform (GCP).
- · Developed diverse agents to work towards common goals.
- Gained experience working with helm charts, Kubernetes (k8s), and k9s.
- Created FastAPI applications to interact with agents.

**Viravirast** Remote

**NLP Engineer** Aug 2022 - Current

- Implemented a paraphrase generation system using generative models.
- Developed a grammar error detection application using transformers.
- Implemented a punctuation suggestion system.
- · Built a grammar error correction system using a combination of ElasticSearch and transformer fill-mask techniques.
- Implemented automatic parallelization for unaligned data.
- Deploying language models in production.
- Processed massive amounts of data using Spark.

OCTOBER 20, 2023

University of Isfahan Isfahan Isfahan

Teaching Assistance Sept 2020 - Aug 2022

• Courses: Data Mining (3x), Computer Programming, Database Design (2x), Analysis and Design of Big Data Systems, Advanced Database Design

· Regularly assisted in tutoring, project and assignment preparation, and assessment

#### **Isfahan University of Technology**

Isfahan, Iran

Apr 2020 - Sept 2020

NLP Researcher and Developer

- Collaborated with a team of four to develop a model for detecting offensive comments.
- · Fine-tuned state-of-the-art language models such as BERT, DeBERTa, mT5, and attention-based models for the task.
- Crawled data, labeled comments, and created datasets for detecting offensive comments.
- · Applied NLP techniques such as data augmentation and active learning to improve the model's robustness.
- Deployed the models as an API.

### **Isfahan University of Technology**

Isfahan, Iran

Jun 2020 - Mar 2021

- Full-stack Web Developer
- Developed REST APIs and encapsulated all features as services.
- Developed a user interface and improved the user experience.
- Monitored the APIs using frameworks such as Elastic and Kibana.
- Handled HTTP requests using Kubernetes.

Freelance Projects Isfahan and Tehran, Iran

Full-stack Web Developer

May 2018 - May 2020

- Plasco: Developed APIs for managing industrial workshops.
- Bringo: Designed and developed a web application for integrating online pharmacies.
- Cubeh: Designed and developed a web application for receiving customer orders to purchase products.
- Rayo: Developed an online reservation system for clinic patients.
- Rayo: Designed and developed a mentoring project.

### Skills\_

NLP Prompt engineering, LangChain, LLMs, Complex reasoning in NLP, Chain of Thought, Gradio, Transformers

Artificial Intelligence Python (Pandas, PyTorch (Geometric, Lightning), NumPy, Tensorflow, Keras, scikit-learn, pyspark, Apache Spark, wandb)

**Web Development** Django Rest Framework, Django, Angular, Angular Material, Angular JS, jQuery, Bootstrap, Materialize

IDE Visual Studio Code, PyCharm, Spyder, Google Colab

Miscellaneous Linux, LTEX(Overleaf/), Git, Docker, Elasticsearch, Kibana, k9s.

**Soft Skills** Time Management, Teamwork, Problem-solving

**Interests** Applied AI, Natural Language Processing, Deep Learning, Machine Learning, Data Scientist, Graph Neural Network

# **Achievements**

2023	Contributor, amazon/MistralLite model, huggingface repository	Online
2022	8th out of 647 teams, Data Science Cup 2022	Amirkabir University
		Technology, Iran
2021	Lecturer for the University of Isfahan, Annual Research Week (Graph Machine Learning)	Iran
2021	1st out of 72 teams, Nation contest in artificial intelligence	Isfahan University of
		Technology, Iran
2020	<b>Tuition Waived for M.Sc degree</b> , Iranian University Entrance Exam, the top <b>4%</b> among more than <b>15000</b>	Iran
	participants.	
2016	<b>Tuition Waived for B.Sc degree</b> , Iranian University Entrance Exam, the top <b>3%</b> among more than <b>160000</b>	Iran
	participants.	

# **Languages**

**English** IELTS (Estimated exam date: 2023-11-18)

Persian Native proficiency

Dutch Elementary proficiency

OCTOBER 20, 2023 2

## Certificate

Offered by DeepLearning.Al, Coursera

Build Basic Generative Adversarial Networks

**Stanford University** 

CS224W: Machine Learning with Graphs **Stanford University** Stanford CS224N: NLP with Deep Learning

Offered by Google, Coursera

Foundations: Data, Data, Everywhere

**Udemy** Udemy TensorFlow Developer Certificate in 2021 Zero to Mastery Machine Learning A-Z<sup>™</sup> Hands-On Python and R in Data Science

## References

#### Dr. Mohammad Ali Nematbakhsh

University of Isfahan

Professor, Dept of Software Engineering

- Email: nematbakhsh@eng.ui.ac.ir
- URL: https://bigdata.ui.ac.ir/faculty-members/mohammad-ali-nematbakhsh/
- Scholar: https://scholar.google.com/citations?user=Z4QLt3IAAAAJ&hl=en&oi=ao

#### Dr. Afsaneh Fatemi Khorasgani

University of Isfahan

Associate Professor, Dept of Software Engineering

- Email: a\_fatemi@eng.ui.ac.ir
- URL: https://bigdata.ui.ac.ir/faculty-members/afsaneh-fatemi/
- Scholar: https://scholar.google.com/citations?user=3-tmjrAAAAAJ&hl=en/

#### Dr. Reza Ramezani

University of Isfahan

Assistant Professor, Dept of Software Engineering

- Email: r.ramezani@eng.ui.ac.ir
- URL: https://bigdata.ui.ac.ir/faculty-members/reza-ramezani/
- Scholar: https://scholar.google.com/citations?user=QDa3wGgAAAAJ&hl=en

OCTOBER 20, 2023