Ali Satvaty

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RESEARCH INTERESTS	**NLP, NLU, Chatbots, Question Answering, Information Retrieval, Text-to-image Generation, Speech Processing, Speech Synthesis, Artificial General Intelligence**

EDUCATION

M.Sc. in Artificial Intelligence – Computer Engineering　　Sept. 2020 - Present
Sharif University of Technology　　Tehran, Iran
- **GPA:** 4/4 (18.00/20)
- **Mentionable Courses:** Deep Learning, Machine Learning, Digital Signal Processing, Natural Language Processing, Speech Recognition, Artificial intelligence

B.Sc. in Control and Robotics – Electrical Engineering　　Sept. 2014 - June 2019
Tehran University　　Tehran, Iran
- **GPA:** 3.7/4 (17.02/20)
- **Mentionable Courses:** Advanced Programming, Digital Logic Design, Microprocessors, Computer Architecture, Signals and Systems Analysis, Linear Algebra

Diploma in Mathematics and Physics　　Sept. 2010 - June 2014
NODET (National Organization for the Development of Exceptional Talents)　　Mashhad, Iran

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PUBLICATIONS

Docalog: Multi-document Dialogue System using Transformer-based Span Retrieval
S.H. Alavian, A. Satvaty, S. Sabouri, E. Asgari, and H. Sameti,　　May 2022, ACL

Docalog++: Improving Multi-document Dialogue System　　Ongoing

How to improve a conversational question answering model? A survey on the recent trends in conversational question answering　　Ongoing

FaCoQA: A conversational question answering dataset for Farsi　　Ongoing

Sharif-T5: Implementing the T5 model for the Persian language　　Ongoing

Naab2: the ready-to-use plug-and-play corpus for Farsi　　Ongoing

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RESEARCH EXPERIENCE

Master's Thesis, *Under the Supervision of Prof. Hossein Sameti*　　2020 – 2022
My master's thesis focused on improving the performance of conversational question answering models. After studying and implementing different ideas within the field, I recently participated in ACL's MultiDoc2Dial workshop, where our model stood fifth. Currently, I am working on implementing my new ideas to improve the proposed model even further, the result of which will be published in my upcoming paper Docalog++.

B.Sc Internship Period, *Under the Supervision of Prof. Mahdi Tale Masouleh*　　2017 – 2018
As a researcher in the Human and Robot Interaction lab, I worked on a Delta robot with 3 degrees of freedom and specialized in its artificial intelligence. The first step was to develop a conveyor belt system, and the second was to design a vision system for the pick and place process. Image

processing was used to detect special, but simple objects, and suction was used to pick them up.

WORK EXPERIENCE	**Data Scientist,** *ASR Gooyesh Pardaz* Feb 2022 - Aug 2022

Data Scientist, *ASR Gooyesh Pardaz*   Feb 2022 - Aug 2022

I was engaged in three projects in this company. One was to develop a smart chatbot to automatically answer the questions of the customers on various websites, easing the role of customer support. We used different question answering and machine comprehension ideas to improve our chatbot. The other one was deep noise suppression and utilizing the SOTA models to develop an industrial API for the task. In the last project, we explored the possibilities and challenges of creating a knowledge graph over the Farsi language and we developed this knowledge graph to some extent.

Backend Developer, *Idearun Co.*   Jan 2019 - Jan 2020

During this period I worked on two different projects. The first one was a platform for barberries to automatize their reservations and also payments. This project had two major sections. One section for the barbers should the web browser to connect to the platform and the other section is designed for their customers who should use our application installed on their phones. The second project was a payment platform in which merchants could create payment forms and could share them with people to pay by connecting to the third-party payment gates. These projects were implemented using the Django framework and Rest API which are both libraries of python.

Freelance Python Developer, *Home*   May 2017 - Jan 2020

I have done many projects as a freelancer. I have created websites using Django as the back-end framework for people. My other projects include web scraping and web crawling, developing scripts for various APIs, or providing desired APIs. Some of my projects are open-source and available on my GitHub.

TEACHING ASSISTANTSHIP	**Information Retrieval course**	
	Instructed by Prof. Beigy (Fall 2022)	Sharif University of Technology
	Deep Learning course	
	Instructed by Prof. Beigy (Fall 2022)	Sharif University of Technology
	Automatic Speech Recognition course	
	Instructed by Prof. Sameti (Spring 2022)	Sharif University of Technology
	Security and Privacy in Machine Learning course	
	Instructed by Prof. Rohban (Fall 2021)	Sharif University of Technology
	Digital Logic Design course	
	Instructed by Prof. Navvabi (Fall 2018)	University of Tehran
	Communication Systems 1 course	
	Instructed by Prof. Abbasfar (Spring 2016)	University of Tehran
	Linear Control Systems Laboratory	
	Instructed by Prof. Abbasian (Spring 2016)	University of Tehran
	Advanced Programming course	
	Instructed by Prof. Khosravi (Fall 2016)	University of Tehran
	Electrical Circuits I Laboratory	
	Instructed by Prof. Rashed Mohassel (Fall 2015)	University of Tehran
	Introduction to Computer and Programming	
	Instructed by Prof. Moradi (Spring 2014)	University of Tehran

HONORS & AWARDS	**Ranked 5**[th]	2022
	ACL's MultiDoc2Dial challenge leaderboard	

Ranked 4th   2021
Sharif University of Technology's AI Challenge
Ranked 4th   2020
Nationwide Information Technology graduate university entrance exam, among 30,000
Ranked 12th   2020
Nationwide Artificial Intelligence graduate university entrance exam, among 35,000
Ranked 1st   2019
Sharif University of Technology's Bot Cup contest
Received scholarship   2017 - 2018
From the university of Tehran's faculty of Engineering as an exceptional talent student
Ranked 192st   2014
Nationwide mathematics university entrance exam among 210,000 participants (top 0.1%)
NODET   2007
Being accepted in the National Organization for Development of Exceptional Talents

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SKILLS

Operating Systems: Linux and Windows
Programming: Python, MATLAB, C/C++/C#, Java, SQL, Html/CSS
Libraries: PyTorch, Tensorflow, Scikit-learn, OpenCV, Pandas, NumPy, Matplotlib, Seaborn
Software: Git, Docker, Mysql, MongoDB, Arduino, AutoCAD, WordPress, Label-studio.
Typesetting: LaTeX, Microsoft Office
Languages: Persian (native), English (99 TOEFL Score), Arabic (Familiar)

HOBBIES

Chess, Boardgames, Podcasts, Football, Friends

REFERENCES

Hossein Sameti, Professor, Computer Engineering Department, Sharif University of Technology
Ehsaneddin Asgari, Professor, Computer Engineering Department, Sharif University of Technology
Amir Abbas Shayegani, Professor, ECE Department, Engineering Faculty, University of Tehran