

SEYED ARSHAN DALILI

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🌐 arshandalili.github.io/🌐 arshandalili 📍 Sharif University of Technology, Tehran, Iran

EDUCATION

- **Bachelor in Computer Engineering** Sep. 2019 - Present
Sharif University of Technology *Tehran, Iran*
- **Diploma of Mathematics** Sep. 2016 - Jun. 2019
Shahid Beheshti School, National Organization for Development of Exceptional Talents (NODET) *Sari, Iran*

UNDER-PREPARATION PUBLICATIONS

- Multimodal Word Sense Disambiguation - *In progress* - *ACL 2023*
- Visual Word Sense Disambiguation (B.Sc. Project) - *In progress* - *SemEval 2023*

HONORS AND AWARDS

- Outstanding GPA (**4.00/4.00**) among Computer Engineering Students at Sharif University of Technology, 2022.
- Ranked **6th nationwide** among more than **164,000** participants in Iran National University Entrance Exam (Konkour) in Mathematics Branch, 2019.
- Received **full scholarship** (tuition waiver) from Sharif University of Technology for Bachelor's degree, 2019.
- Received Iran's **National Elite Foundation fellowship**, 2019.
- Admitted to National Organization for Development of Exceptional Talents (NODET), \approx **2% Acceptance Rate**, 2013.

RESEARCH INTERESTS

- Natural Language Processing
- Information Retrieval & Extraction
- Social Network
- Machine Learning

RESEARCH EXPERIENCE

- **Visual Word Sense Disambiguation (B.Sc. Project)** Aug. 2022 - Present
Supervisor: Dr. Ehsaneddin Asgari *Sharif University of Technology*
 - Working on a model to select the appropriate image for ambiguous words in a given context.
 - Transform pictures and texts into a same space and bring semantically related pictures and texts.
 - Working on using pre-trained models like CLIP to select relevant images from ambiguous textual contexts.
- **Computational Semantics** Aug. 2022 - Present
Supervisor: Dr. Ehsaneddin Asgari *Sharif University of Technology*
 - Developing a dataset that will enable models to learn the semantics and senses of a word in both the textual and visual contexts.
 - Exploring various methods for capturing semantics of texts.
 - Analyzing methods for enabling multimodal models to comprehend Natural Language.
- **Early Fake News Detection** Feb. 2022 - Present
Supervisor: Ms. Maryam Ramezani *Sharif University of Technology*
 - Working on a novel Deep Reinforcement Learning model to detect fake news early with a 3.3% improvement in earliness of PolitiFact dataset compared to Credible Early Detection Point model.

- Implemented Credible Early Detection Point model with Pytorch to make it easier to use compared to paper's original Tensorflow V1 and verified by getting same results as paper. [code]
- Reviewed fake news detection models such as Early Detection of Fake News on Social Media Through Propagation Path Classification with Recurrent and Convolutional Networks.

TEACHING EXPERIENCE

- **Artificial Intelligence** Sep. 2022 - Present
Instructor: Prof. Mohammad Hossein Rohban Sharif University of Technology
 Designing practical assignments about local search, reviewing assignments about continuous optimization, designing questions for mid-term, and grading assignments.
- **Modern Information Retrieval** Sep. 2022 - Present
Instructor: Prof. Hamid Beigy Sharif University of Technology
 Holding TA classes, creating practical coursework, supervising, and grading assignments
- **Computer Architecture** Feb. 2022 - Sep. 2022
Instructor: Prof. Hamid Sarbazi-Azad Sharif University of Technology
 Grading assignments, mid-term, and final exam and writing solutions for mid-term and final exams.
- **Computer Structure and Language** Sep. 2021 - Feb. 2022
Instructor: Prof. Hamid Sarbazi-Azad Sharif University of Technology
 Designing projects with practical questions in MIPS processor.
- **Fundamentals of Electrical and Electronic Circuits** Sep. 2021 - Feb. 2022
Instructor: Prof. Ali Mohammad Afshin Hemmatyar Sharif University of Technology
 Thevenin-Norton Equivalencies and Laplace Transform theoretical assignments and grading.
- **Advanced Programming** Sep. 2020 - Feb. 2021
Instructor: Dr. Vahid Salmani Sharif University of Technology
 Grading practical coursework and project in Java language.

WORK EXPERIENCE

- **Advisor, National University Entrance Exam (Konkour)** Jun. 2020 - Feb. 2021
Various Institutions and Private Sari, Iran
- **Tutoring, High School Mathematics** Jun. 2020 - Feb. 2021
Various Institutions and Private Sari, Iran
- **Tutoring, High School Physics** Jun. 2020 - Feb. 2021
Various Institutions and Private Sari, Iran

SELECTED COURSE PROJECTS

- **Sentiment Analysis for Friends show script [code]:**
 Natural Language Processing - Supervisor: Dr. Ehsaneddin Asgari - Fall 2022
- **Search engine for crawled news using Boolean, TF-IDF, FastText, Transformers, and Elasticsearch models & classification, clustering, and link analysis for crawled news [code]:**
 Modern Information Retrieval - Supervisor: Dr. Ehsaneddin Asgari - Spring 2022
- **Create a model to detect numerical values and physical quantities in Persian texts with the ability to convert physical quantities [code]:**
 Modern Information Retrieval- Supervisor: Dr. Ehsaneddin Asgari - Spring 2022
- **Introduction to Stanza NLP model and reviewing its structure [slides] [video]:**
 Numerical Computations - Supervisor: Dr. Fatemeh Baharifard - Spring 2021
- **Training an agent to play Atari using Deep Reinforcement Learning [code]:**
 Artificial Intelligence - Supervisor: Prof. Mohammad Hossein Rohban - Fall 2021

RELEVANT COURSES

Artificial Intelligence	20.0/20.0
Modern Information Retrieval	20.0/20.0
Linear Algebra	19.6/20.0
Data Structures and Algorithms	20.0/20.0
Design Algorithms	19.8/20.0
Scientific and Technical Presentation	19.4/20.0
Numerical Computations	20.0/20.0
Game Theory	20.0/20.0
Computer Simulation	20.0/20.0

SKILLS SUMMARY

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- **Programming Languages:** Python, C, C++, Java, SQL, Verilog, Assembly
 - **Packages and Applications:** Pytorch, Tensorflow, Sklearn, NLTK, Scipy, Numpy, Pandas, Django, Modelsim, Proteus Design Suite
 - **Tools:** Git, Docker, Jira, PostgreSQL, L^AT_EX

LANGUAGE PROFICIENCY

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- **Farsi:** Native
 - **English:** Fluent

EXTRACURRICULAR ACTIVITIES

Loves running / Playing video games / Movie buff / Photography / Exploring new places (Climbing,...)