Seyyed Makan Haji Seyyed Javadi

+98 912 9472579 • makan.h.s.javadi@gmail.com

Research Interests: Natural Language Processing, AI in Healthcare, Applied AI

Education

- **M.Sc., Computer Science and Engineering** , Sharif University of Technology *October 2025 – Present*
- **B.Sc., Computer Engineering**, Iran University of Science and Technology *October 2021–September 2025*
  - *GPA:* 19.03/20
- **High School Diploma, Mathematics and Physics**, National Organization for Development of Exceptional Talents (Sampad) *October 2016–September 2021*
  - *GPA:* 19.22/20

Publications

- **Twitter as a Time Series: LLM-Assisted PHQ-9 Annotation and GRU-Based Forecasting**
  B.Sc. Thesis, Iran University of Science and Technology *In Progress*
- **Survey of Propagation Models in Social Networks and Applications**
  M. H. S. Javadi, *M. Barfi, E. G. Mateki, F. G. Baghbani* *Under revision at ACM Computing Surveys, 2025*
- **Knowledge-Defined Networking IoT Framework for Smart Grid Protection**
  K. D. Seifi, ***M. H. S. Javadi***, *E. G. Mateki, M. H. Alaeiyan* *Submitted to IEEE i-COSTE 2025*

Selected Projects

- **LoRA Implementation for Emotion Classification** *(Natural Language Processing)*
  - Fine-tuned transformer models using Low-Rank Adaptation (LoRA) for emotion classification.
  - Performance comparison with small language models to optimize accuracy and efficiency.
- **Retrieval-Augmented Generation (RAG) System** *(Natural Language Processing)*
  - Designed an end-to-end RAG pipeline that integrates document retrieval with an LLM.
  - Improved response quality by combining retrieval precision with generative capabilities.
- **Comparative Analysis of Word Embedding Models** *(Natural Language Processing)*
  - Implemented and evaluated Word2Vec and GloVe embeddings.
  - Visualized high-dimensional word relationships using t-SNE.
- **Decision Tree for Titanic Survival Prediction** *(Artificial Intelligence and Expert Systems)*
  - Built a decision tree from scratch using entropy and the Gini index for binary classification.
- **Function Approximation Using Genetic Programming** *(Artificial Intelligence and Expert Systems)*
  - Developed a genetic programming algorithm to approximate mathematical functions.
- **Multilayer Perceptron (MLP) for Function Approximation** *(Artificial Intelligence and Expert Systems)*
  - Implemented an MLP neural network for regression and classification tasks.
- **Support Vector Machine (SVM) Classification** *(Artificial Intelligence and Expert Systems)*
  - Applied SVM models with different kernels for text and image classification.
- **Model for Malware Detection Based on Pattern Matching** *(Design and Analysis of Algorithms)*
  - Developed a model that uses a pattern matching algorithm to detect malware using hexadecimal signatures.

Technical Skills

- **Programming/Modeling Languages:**: C, C#, Python, Assembly, JavaScript, TypeScript.
- **Machine Learning:**: Google Colab, TensorFlow, PyTorch, Scikit-Learn
- **Web/DB Technologies:** Svelte, HTML, CSS, Sass, Chakra UI, MUI, Django Framework, MySQL.

- **Hardware Description Language:** Verilog, VHDL.
- **OS:** Linux, Windows.
- **Other Tools:** Mininet, Cicso Packet Tracer, ANTLR, AVR Studio, Xilinx, Atmel Studio, Git, VMware, Proteus Design Suite, gem5, LaTeX, MATLAB.

Teaching Assistant Experience

- **Sharif University of Technology**
  - Design and Analysis of Algorithms — *September 2025–Present*
- **Iran University of Science and Technology**
  - Deep Learning — *September 2025–Present*
  - Information Retrieval and Web Search — *February 2025–September 2025*
  - Theory of Languages and Automata — *February 2025–September 2025*
  - Data Communication — *February 2025–September 2025*
  - Computer-Aided Design — *February 2025–September 2025*
  - Artificial Intelligence and Expert Systems — *February 2024–June 2024*
  - Compiler Design — *February 2024–June 2024*
  - Theory of Languages and Automata — *February 2024–June 2024*
  - Discrete Mathematics — *February 2024–June 2024*
  - Electrical Circuits — *September 2023–February 2024*
  - Fundamentals of Computer Programming [C/Python] — *September 2022–February 2023*
  - Discrete Mathematics — *September 2022–February 2023*

Honors and Awards

- **Ranked first among all Computer Engineering students at the end of the first year. (2021 Entrance)**
  - Iran University of Science and Technology — *Fall 2022*
- **Ranked third among all Computer Engineering students at the end of the third year. (2021 Entrance)**
  - Iran University of Science and Technology — *Fall 2024*

Activities

- **Associated Member of the Iran University of Science and Technology Scientific Association**
  - Computer Engineering Scientific Association (CESA) — *Spring 2021–Spring 2022*

Languages

- **English** - Proficient (Listening: 8.5, Reading: 6.5, Writing: 6.5, Speaking: 7.0)
- **Persian(Farsi)** - Native

References

- **Saeed Parsa** — *Full Professor of Computer Engineering*
  parsa@iust.ac.ir
- **Sauleh Eetemadi** — *Assistant Professor of Computer Engineering*
  sauleh@iust.ac.ir
- **Hamid Reza Maimani** — *Full Professor of Mathematics & Computer Science*
  maimani@ipm.ir
- **Parvaneh Asghari** — *Assistant Professor of Computer Engineering*
  p_asghari@iauctb.ac.ir