

Amirreza Fateh

PERSONAL INFORMATION

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PROFESSIONAL SUMMARY

I am a PhD candidate in computer engineering with a research focus on computer vision, few-shot learning, and medical imaging. Beyond my own research, I serve as a Lab Coordinator, where I actively mentor graduate students and assist in supervising their thesis projects.

EDUCATION

Iran University of Science and Technology, Tehran, Tehran Province, Iran

PhD in computer Engineering – artificial intelligence

Sep. 2021 – Present

- GPA: **18.96**/20
- Thesis: “Few-Shot Semantic Segmentation”
- Advisors: Mohammadreza Mohammadi - Mohammadreza Jahed Motlagh

Shahrood University of Technology, Shahrood, Semnan Province, Iran

Master of Science in computer Engineering – artificial intelligence

Sep. 2019 – Sep. 2021

- GPA: **19.34**/20
- Thesis: “Persian Document Layout Analysis”
- Advisor: Mohsen Rezvani

Shahrood University of Technology, Shahrood, Semnan Province, Iran

Bachelor of Science in computer Engineering – Softwares

Sep. 2015 – Sep. 2019

- GPA: **18.8**/20
 - Thesis: “Profiling web applications to improve intrusion detection”
 - Advisor: Mansoor Fateh
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RESEARCH INTERESTS

Few-Shot Learning, Multimodal, Medical Imaging, Prompt Learning, OCR

JOURNAL PUBLICATIONS

Published / Accepted Papers

- S. Katami, M. Fateh, M. Rezvani, **A. Fateh**. “Retinal Fundus Image Segmentation Using Deep Learning.” *Journal of Machine Vision and Image Processing*, Accepted 2026.
- **A. Fateh**, M. Mohammadi, M. Jahed Motlagh. “Adapting SAM with a Triple-Prompt Strategy for One-Shot Semantic Segmentation.” *Neurocomputing*, Published 2026, link.
- **A. Fateh**, Y. Rezvani, S. Moayedi, S. Rezvani, F. Fateh, M. Fateh, V. Abolghasemi. “BRISC: Annotated Dataset for Brain Tumor Segmentation and Classification.” *Scientific Data*, Published 2026, link.
- A. Saber, M. Sharifi Fakhim, **A. Fateh**, M. Fateh. “A Lightweight Multi-Scale Refinement Network for Gastrointestinal Disease Classification.” *Expert Systems with Applications*, Published 2026, link.
- A. Saber, M. Hosseini, **A. Fateh**, M. Fateh, V. Abolghasemi. “Lightweight Multi-Scale Framework for Human Pose and Action Classification.” *Sensors*, Published 2026, link
- M. Gholami, M. Fateh, **A. Fateh**. “Multi-Modal Semantic Image Segmentation Model Based on Improved DeepLabV3+ Framework Using Attention Modules.” *International Journal of Engineering (IJE)*, Published 2026, link.
- A. Saber, **A. Fateh**, P. Parhami, A. Siahkarezadeh, M. Fateh, S. Ferdowsi. “Efficient and Accurate Pneumonia Detection Using a Novel Multi-Scale Transformer Approach.” *Sensors*, Published 2025, link.

- **A. Fateh**, M. Mohammadi, M. Jahed Motlagh. "MSDNet: Multi-Scale Decoder for Few-Shot Semantic Segmentation via Transformer-Guided Prototyping." *Image and Vision Computing*, Published 2025, link.
- H. Khajeha, M. Fateh, V. Abolghasemi, **A. Fateh**, M. H. Emamian, H. Hashemi, A. Fotouhi. "Diagnosis of Glaucoma Using Ensemble Learning Techniques with Optical Coherence Tomography." *Engineering Reports*, Published 2025, link.
- F. Askari, **A. Fateh**, M. Mohammadi. "Enhancing Few-Shot Image Classification through Learnable Multi-Scale Embedding and Attention Mechanisms." *Neural Networks*, Published 2025, link.
- M. Sharifi Fakhim, M. Fateh, **A. Fateh**, Y. Jalali. "DA-COVSGNet: Double Attentional Network for COVID Severity Grading." *International Journal of Engineering (IJE)*, Published 2025, link.
- S. Rezvani, M. Fateh, Y. Jalali, **A. Fateh**. "FusionLungNet: Multi-Scale Fusion Convolution with Refinement Network for Lung CT Image Segmentation." *Biomedical Signal Processing and Control*, Published 2025, link.
- **A. Fateh**, R. Tahmasbi Birgani, M. Fateh, V. Abolghasemi. "Advancing Multilingual Handwritten Numeral Recognition With Attention-Driven Transfer Learning." *IEEE Access*, Published 2024, link.
- **A. Fateh**, M. Fateh, V. Abolghasemi. "Enhancing Optical Character Recognition: Efficient Techniques for Document Layout Analysis and Text Line Detection." *Engineering Reports*, Published 2023, link.
- **A. Fateh**, M. Rezvani, A. Tajary, M. Fateh. "Persian Printed Text Line Detection Based on Font Size." *Multimedia Tools and Applications*, Published 2023, link.
- **A. Fateh**, M. Rezvani, A. Tajary, M. Fateh. "Providing a Voting-Based Method for Combining Deep Neural Network Outputs to Layout Analysis of Printed Documents." *Journal of Machine Vision and Image Processing*, Published 2022, link.
- **A. Fateh**, M. Fateh, V. Abolghasemi. "Multilingual Handwritten Numeral Recognition Using a Robust Deep Network Joint with Transfer Learning." *Information Sciences*, Published 2021, link.

Under Review Papers

- A. Movahedisefat, **A. Fateh**, M. Mohammadi. "Enhancing MedSAM with a Lightweight Box Predictor for Medical Image Segmentation." *Biomedical Signal Processing and Control*, Revised.
- N. Danayetous, M. Fateh, **A. Fateh**, V. Abolghasemi. "Enhancing Skin Cancer Detection with Double U-Net Segmentation and Attention-Enhanced Multiscale Feature Extraction." *BMC Medical Informatics and Decision Making*, Revised.
- **A. Fateh**, M. Mohammadi, M. Jahed Motlagh. "DTP-SAM: Adapting SAM with Dual-Text Prompting for One-Shot Semantic Segmentation." *Information Processing and Management*, Under review.
- **A. Fateh**, Y. Rezvani, S. Rezvani, M. Fateh, V. Abolghasemi. "Swin-HAFNet: A Hierarchical Multi-Task Transformer for Brain Tumor Segmentation and Classification." *npj Precision Oncology*, Under review.
- M. Khoursha, **A. Fateh**, M. Mohammadi. "Template matching meets vision foundation models." *Journal of Visual Communication and Image Representation*, Under review.
- **A. Fateh**, M. Mohammadi, M. Jahed Motlagh. "DTP-SAM: Adapting SAM with Dual-Text Prompting for One-Shot Semantic Segmentation." *Information Processing & Management*, Under review.

PROGRAMMING SKILLS

- **Programming:** Python, C++, MATLAB, Bash, Git
 - **Deep Learning Frameworks:** PyTorch, TensorFlow, Keras, Scikit-Learn
 - **Computer Vision:** OpenCV, MMDetection, MONAI
 - **Scientific Computing:** NumPy, SciPy, Pandas, Matplotlib
 - **Tools & Platforms:** Linux, Docker, CUDA, Jupyter, LaTeX
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Completed more than 300 peer reviews for international journals in computer vision, artificial intelligence, and machine learning. Selected journals include:

- IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Transactions on Image Processing (TIP)
- Expert Systems with Applications
- Pattern Recognition
- CAAI Transactions on Intelligence Technology
- Applied Soft Computing
- Neural Networks
- Biomedical Signal Processing and Control
- Image and Vision Computing (IMAVIS)
- ACM Transactions on Multimedia Computing, Communications, and Applications
- Displays
- Scientific Reports
- Multimedia Tools and Applications
- Data Mining and Knowledge Discovery
- IET Image Processing
- Information Fusion
- IEEE Transactions on Circuits and Systems for Video Technology (TCSVT)
- Engineering Applications of Artificial Intelligence
- Information Sciences
- Knowledge-Based Systems
- Information Processing & Management
- Journal of Agriculture and Food Research
- Computer Methods and Programs in Biomedicine
- Computer Methods and Programs in Biomedicine Update
- Computer Vision and Image Understanding (CVIU)
- International Journal of Multimedia Information Retrieval
- IEEE Access
- International Journal on Document Analysis and Recognition (IJ DAR)

Lab Coordinator

CVLab SHUT Sep. 2022 – Present

- Mentored PhD students and supervised the theses/projects of M.Sc. and Bachelor students.
- Led research initiatives in computer vision and deep learning.

Research Assistant

CVLab IUST Sep. 2021 – Present

- Conducted advanced research on few-shot learning as part of my PhD thesis.
- Provided mentorship to students working on few-shot learning projects.

Teaching Assistant

Iran University of Science & Technology Sep. 2021 – Sep. 2023
 • Deep Learning Spring 2022, Spring 2023
 • Image Processing Fall 2022
 • Fundamentals of Deep Learning (for Bachelor students) Fall 2021

Shahrood University of Technology Sep. 2017 – Sep. 2020
 • Artificial Intelligence Spring 2020
 • Fundamentals of Data Mining Fall 2019
 • Information Retrieval Fall 2019
 • Engineering Mathematics Fall 2018, Spring 2019
 • Discrete Mathematics Spring 2018
 • Logic Circuits Fall 2017

- Recognized as an academically talented student by Iran's National Elites Foundation; awarded to top students for exceptional academic achievement 2022–2025
- Member, Iran's National Elites Foundation 2022–Present
- Ranked 1st in the PhD in Computer Science coursework phase 2023
- Ranked 1st in the M.Sc. in Computer Science program 2021
- Ranked 2nd in the B.Sc. in Computer Science program 2019

REFERENCES

Mohammadreza Jahed Motlagh
*Professor, Department of Computer Engineering,
Iran University of Science & Technology, Tehran, Iran*
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Vahid Abolghasemi
*Associate professor, School of Computer Science and Electronic Engineering (CSEE),
University of Essex, UK*
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