

## Education

- 2022–2025 **M.Sc. in Software Engineering**, Azad University, Najafabad Branch, Isfahan, Iran  
**GPA:** 3.77/4.00 (Top Student; direct Ph.D. admission)  
**Thesis:** *An Optimized Federated Deep Learning Approach for Intrusion Detection in Dew Computing*  
**Advisor:** Dr. Barekatain
- 2017–2022 **B.Sc. in Computer Engineering**, University of Isfahan, Isfahan, Iran  
**GPA (last 60 credits):** 3.00/4.00  
**Thesis:** *Design and Implementation of an ADS-B-Based Aircraft Observation System*  
**Advisor:** Dr. Bohlooli  
**Award:** Best Bachelor's Thesis (2022)

## Publications & Research

- 2023–2025 **M.Sc. Thesis Research**, Azad University, Najafabad Branch, Isfahan, Iran  
*Optimized Federated Deep Learning for Intrusion Detection in Dew Computing*
- Developed CNN-based IDS optimized for resource-constrained edge nodes.
  - Reduced bandwidth via federated updates; cut training time by ~58%.
  - Achieved ~97% accuracy in 15-class classification.
- Publication:** A. Fadaei, B. Barekatain. *An Optimized Federated Deep Learning Approach for Intrusion Detection in Dew Computing*. Manuscript in preparation (2025).

## Research Interests

- Machine Learning & AI Security Deep Learning, Federated Learning, Adversarial ML, Explainable AI, Privacy-Preserving Learning, LLM Security, Trustworthy AI
- Cybersecurity Intrusion Detection, Threat Intelligence, Adversarial Attacks, Ransomware, IoT & Cloud Security, Privacy & Data Protection
- Computer Networks IoT, Dew/Cloud Computing, SDN, Network Virtualization, Digital Twins

## Honors & Awards

- Summer 2025 Top Student, M.Sc. Software Engineering, Azad Univ. (direct Ph.D. admission).
- Spring 2025 Judge, 2<sup>nd</sup> National Dana Cup Competition (Web Application Design).
- Summer 2022 Best B.Sc. Thesis Award, Dept. of Computer Engineering, University of Isfahan.
- Spring 2022 National M.Sc. Entrance Exam: Ranked 185/150,000 (top 0.12%).

## Teaching Experience

- 2024, 2025 **Backend Programming Instructor**, Dana Cup Competition, Isfahan, Iran  
Trained 80+ students in backend design and software engineering for national programming contests.
- 2020–2021 **Teaching Assistant**, University of Isfahan, Isfahan, Iran
- **Compiler Design** — Fall 2021 (Supervisor: Dr. Asadi)
  - **Fundamentals of Programming** — Fall 2020 (Supervisor: Dr. Asadi)
  - **Computer Workshop** — Winter 2020 (Supervisor: Dr. Bohlooli)
- 2021 **Python Instructor**, Faculty of Agriculture, Isfahan University of Technology, Isfahan, Iran  
Delivered applied Python programming workshops to non-CS majors.
- 2018–2019 **Mathematics Teacher**, Technical and Vocational School, Isfahan, Iran  
Taught algebra and geometry to high school students.

## Work Experience

- 2024–Present **Programming Instructor**, *Iran TVTO*, Isfahan, Iran  
Teaching programming fundamentals and software development practices to vocational students in official training programs.
- 2022–2024 **Software Developer**, *Fardaad (ISTT)*, Isfahan, Iran  
Built vulnerability and patch management tools deployed in municipal/government networks; Optimized backend algorithms, reducing patch deployment time by 40%.
- 2021–2022 **Backend Developer**, *Meta Menu (Poytek)*, Isfahan, Iran  
Contributed to the development of a cloud-based restaurant management system as part of an agile startup team.
- 2021–2022 **Backend Developer**, *PCG Lab, Isfahan University of Technology*, Isfahan, Iran  
Built a biomedical information extraction system using academic research papers; integrated NLP techniques and database storage.

## Skills

- Programming & ML Python, C++, Java, TensorFlow, Scikit-learn, Pandas, NumPy
- Systems & Security Docker, Nginx, Vulnerability Mgmt, CloudSim, Linux
- Databases & Web Django, DRF, REST APIs, MySQL, PostgreSQL
- Certification LPIC-1: Linux Professional Institute Certification

## Test Scores

- IELTS (March 2025) Overall: 7.5 (Reading: 8.5, Listening: 7.5, Writing: 7.0, Speaking: 6.5)

## References

- Dr. Ali Bohlooli**, *Associate Professor of Computer Engineering*, University of Isfahan, Faculty of Computer Engineering  
bohlooli@eng.ui.ac.ir
- Dr. Behrang Barekatin**, *Associate Professor of Computer Engineering*, Azad University, Najafabad Branch, Faculty of Computer Engineering  
behrang\_barekatin@iaun.ac.ir
- Dr. Shohre Ajoudanian**, *Assistant Professor of Computer Engineering*, Azad University, Najafabad Branch, Faculty of Computer Engineering  
shajoudanian@iau.ac.ir