SEYED AMIR BIDAKI

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About

A results-driven Computer Scientist with expertise in AI, machine learning, and deep learning. I have experience developing scalable AI models, optimizing data pipelines, and applying data-driven insights to solve real-world challenges. My combined background in research and teaching strengthens my ability to collaborate across technical teams and deliver impactful, efficient solutions.

Education

- M.Sc in Artificial Intelligence, I.A University, Karaj, Iran
- B.Sc in Computer Science, University of Guilan, Guilan, Iran 2024
  GPA : 18.5 / 20.0

Research Experiences

- **"Online Continual Learning: A Systematic Literature Review of Approaches, Challenges, and Benchmarks" Under Review (Arxiv Link),** 2025
  Seyed Amir Bidaki, et al.
  We conducted a systematic literature review on online continual learning, analyzing over 2,000 publications and, after quality assessment, extracting detailed data from 81 key articles. Our study covered strategies, learning settings, evaluation metrics, benchmarks, datasets, and quality attributes, resulting in a 46-page manuscript. I was the first author and the main initiator of the project, contributing to all phases — from idea conception and methodology design to analysis and writing. This paper is currently under review at Neural Network (Elsevier).
- **"Continual Learning in Neuroimaging: A Comprehensive Survey and Benchmark Study" Preparing** 2025
  Seyed Amir Bidaki, et al.
  Currently, I am extending my research to neuroimaging applications, focusing on tasks such as tumor segmentation, modality registration, and disease classification. Our work systematically analyzes existing approaches in terms of model components, evaluation metrics, datasets, and methodologies. We also aim to propose standardized benchmarks and continual learning settings—such as domain incremental segmentation—to guide future research in this field.
- **"Intrusion Detection by leveraging online continual learning" Preparing** 2025
  Seyed Amir Bidaki, et al.
  This research focuses on applying online continual learning techniques to network intrusion detection, enabling models to adapt to evolving cyber threats without catastrophic forgetting. The study investigates various anomaly detection strategies, model architectures, and evaluation protocols to enhance robustness and real-time adaptability in dynamic network environments.

Some Projects

- **Machine Learning & Optimization:** Implemented ML algorithms for classification, prediction, and neural networks for image recognition; used genetic algorithms for optimization and applied RNNs for sentiment analysis.
- **AI Search & Problem Solving:** Built solvers for the 8-puzzle using A* search, and for Sudoku using Genetic Algorithms and Simulated Annealing, optimizing performance with heuristic evaluation and evolutionary techniques.
- **Simulation & Statistical Analysis**: Developed random number generation algorithms, queue simulations, and implemented MLE with exponential, Poisson, and geometric distributions in Python; simulated scheduling algorithms (FCFS, SPN, HRRN) with Gantt chart visualizations.
- **Theoretical Research**: Conducted an in-depth study on SAT (Boolean Satisfiability Problem), presenting problem statements, proposed solutions, and current research trends.

Work & Teaching Experiences

- **Computer laboratory manager** - Faculty of Mathematical Science, University of Guilan - 2024
  Maintained, updated, and troubleshot the network and software of laboratory computers. (On-Site)
- **Research Assistant** - University of Guilan Sep 2023 – Present
- **Teaching Assistant** - University of Guilan Sep 2022 – 2024 : Courses: Computer Principles and programming, Advanced Programming, Principles of Computer Systems, Artificial Intelligence, Design & Analysis of Algorithms
- **Teacher** – Pajoohan Complex – Karaj – 2024 - present : AI, Algorithm Design and Python Programming

Skills

- Python
- Matlab
- SQL
- C++
- TensorFlow
- Scikit-Learn
- PyTorch
- REST Framework
- ORM
- FastAPI
- Plotly
- Matplotlib
- Pandas
- Polars
- Git (GitHub & GitLab)
- Docker
- Network +
- Mathematics
- Statistics

Languages

English : Advanced
(IELTS Score: Overall: 7 , Listening: 7 , Reading: 8.5 , Writing: 6.5 , Speaking: 6.5)

Certificates

- Supervised Machine Learning: Regression and Classification — Stanford-DeepLearning.AI
- Advanced Learning Algorithms — Stanford-DeepLearning.AI
- Unsupervised Learning, Recommenders, Reinforcement Learning — Stanford-DeepLearning.AI

Awards

- Ranked $1st$ among about 60 students of the Computer Science in all educational semesters, class of 2019, University of Guilan
- **In Top 10 highest Overall GPA ranking** among all Computer Science students (more than 400 students) from 2015 until now, University of Guilan
- Recognized as the Top Academic Student at the University of Guilan and recipient of the top academic award, University of Guilan, 2024