# Ali Mikaeili

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## Objective

An artificial intelligence student with a strong enthusiasm and readiness to learn new skills and sciences. Interested in **combining research fields**, particularly in the areas of **deep neural networks, and Machine learning Algorithms**. With a work history at one of the largest operators in Asia, I have participated in both international and national exhibitions. Eager to contribute to advanced research and projects, leveraging the experiences outlined in the attached resume.

## Education

**University of Tehran** — Tehran, Iran
Master of Science, Artificial Intelligence — 2023
– *Thesis: Machine Learning — Neuroscience — Digital Twin — IIOT*

**Payame Noor University** — Ardabil, Iran
Bachelor of Engineering, Software Engineering — 2020–2023
– *Thesis: Predicting Diabetes using Machine learning algorithms*

## Work Experience

**Hamrahe Aval (MCI), Mobile Communication Company of Iran** — Tehran, Iran
Data analyst, Image Analysis Group, Research and Development Department(R and D) — 2023

- Engaged in the development of Text-to-Speech (TTS) and Emotion Speech Recognition (ESR) projects at Hamrah Aval company in preparation for the prestigious international GITEX exhibition.
- Currently I am Designing architectures for the creation and application of a digital twin in industrial settings, focusing on both the digital twin itself and its operators.

**Payame Noor University** — Ardabil, Iran
Teaching Assistant, Dept. of Computer Science & Engineering. — 2020–2023

- Assisted in teaching Data Structures and Algorithms, engaging students through in-class instruction and interactive video demonstrations.
- Contributed to the Artificial Intelligence Course by crafting challenging homework assignments, meticulously grading tests, and leading engaging hands-on sessions.
- Supported the Operating System Course by facilitating dynamic hands-on classes and designing comprehensive midterm assessments.

## Skills

**Programming Languages:** Python, Java, Kotlin, C, C++
**Machine Learning tools:** Pytorch, Keras, Tensorflow, NumPy, Pandas, Scikit-Learn, Matplotlib
**Other skills:** Git, LaTeX, Linux, Flutter, Docker
**Languages:** English(Advanced), Persian(Native), Azerbaijani(Native), Turkish(advanced),

## Selected Courses

- **Payame Noor University, Bachelors:** Linear Algebra, Probability and Statistics, Calculus (Engineering Mathematics), Data Structures and Algorithms, Theory of Computation, Object-Oriented Programming, Principles of Computational Intelligence, Artificial Intelligence, Advanced Algorithm Design, Signals and Systems Analysis, Discrete Mathematical Structures
- **University of Tehran (M.Sc):** Machine Learning, Neural Network and Deep Learning, Statistical Inference, Natural Language Processing, Data Fusion, Explainable AI and Trustworthy
- **Online Audited Courses:** Foundations of Deep Learning,Deep Reinforcement Learning, Generative Adversarial Networks (GANs), Deep Learning for Computer Vision, Machine Learning with Graphs

## Publications (Selected)

– Mikaeili Barzili, Ali & Azimi Moghadam, Ramin, 2021, Review of the Role of Internet of Things in Healthcare, Twelfth National Conference on Computer Science and Information Technology Engineering, Babol, `https://civilica.com/doc/1224707`

## Projects

**GitHub**

– Implemented the `SAM (Segment Anything Model)` on the Water Bodies Dataset, achieving precise segmentation results for diverse water bodies.

– Developed a predictive model for identifying `suicidal thoughts` in social network users based on their tweet content, contributing to mental health awareness and intervention efforts.

– Engineered a robust `Speech Emotion Recognition` system using the Shemo Persian speech emotion detection database, enabling accurate classification of emotional states from speech signals.

– Conducted fine-tuning of the BERT model tailored for the Persian language, enhancing its performance in natural language processing tasks specific to Persian text.

– Employed Generative Adversarial Networks (GAN) to generate a synthetic version of the `MNIST Dataset`, facilitating research and development in computer vision and machine learning.

– Implemented Adaptive Synthetic Sampling techniques to improve the effectiveness of `Credit Card Fraud Detection`, enhancing the security measures in financial transactions.

– Contributed to the `ControlVAE` project by generating pictures using Control VAE, advancing research in variational autoencoders and image generation.