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https://scholar.google.com/citations?user=hCoq_YcAAAAJ&hl=en

AI and Bioinformatics researcher with a Master's in Bioinformatics and a Bachelor's in Computer Science, backed by over 4 years of applied research at DFKI. Experienced in computer vision, biomedical image analysis, and generative modeling. Proficient in Python, PyTorch, and molecular simulation workflows. Passionate about nanonetwork communication, machine learning, and interdisciplinary research at the interface of biology, medicine, and engineering.

Research Assistant *Saarbruecken, Germany*

- Applied deep learning models for live cell segmentation and tracking in microscopy images.
- Created and refined datasets for microscopy image analysis to improve model performance.

Data Scientist *Tehran, Iran*

- Developed, trained, and deployed deep learning models (such as YOLO series, EfficientDET, RetinaNet, and CenterNet) for Object Detection, Face Recognition, Fire Detection, and Violence Detection tasks

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M.Sc. Bioinformatics *Saarbruecken, Germany*

- : Segment and Track Anything for Microscopy (Grade: 1.0/1.0)
- : Applied Computer Vision (Image Segmentation: Segment Anything, SAM2, YOLO, and Object Tracking: ByteTrack, PIPS, CoTracker, DeepSort, TapNet), Generative Models

B.Sc. Computer Science *Tehran, Iran*

- : Representing UbiqLog Dataset in three different mediums (Music Generation, Narrative, Animation with Deep RL)
- : Creative AI, Multimodal Learning, Deep Reinforcement Learning, Representation Learning, Generative Models

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- Box it, Track it: A Weakly Supervised Framework for Cell Tracking, *DAGM GCPR 2025*
- SAT: Segment and Track Anything for Microscopy, *ICCART 2025*
- CellGenie: An End-to-End Pipeline for Synthetic Cellular Data Generation and Segmentation: A Use Case for Cell Segmentation in Microscopic Images, *Conference on Medical Image Understanding and Analysis (MIUA 2024)*
- DeepMuCS: a framework for co-culture microscopic image analysis: from generation to segmentation, *IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI)*
- Point2mask: a weakly supervised approach for cell segmentation using point annotation, *MIUA 2022*

- :
  - C++, Python (including libraries like PyTorch, TensorFlow, Keras, Scikit-learn, Numpy, Pandas), SQL, Docker, Git, CI/CD
  - Object Detection, Object Tracking, Generative Models, Anomaly Detection, Deep Learning, Computer Vision, AB Testing, Large Language Models (LLMs), VLMs
  - Matplotlib, Plotly, Seaborn
  - AWS SageMaker, Elasticsearch, Kubeflow
  - Statistical Modeling, Predictive Analytics, Probability Theory
- : Effective Communicator, Problem Solver & Creative Thinker, Fast Adopter, Leader & Team Player
- : Football, Video Games, Movies

- : Full professional proficiency : Limited working proficiency