Keivan Ipchi Hagh

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Research Interests

Computer Vision, Natural Language Processing, Reinforcement Learning, Robotics

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Education

Amirkabir University of Technology (2nd in Iran by QS Ranking)   Tehran, Iran
B.Sc. in Computer Engineering   Sep. 2019 – Present
Submajor: Artificial Intelligence   *GPA: 3.6 / 4.0*
Thesis Title: Semantic Segmentation for Autonomous Driving
Supervisor: Dr. Ehsan Nazerfard
Relevant Coursework (All "A"): Data Structures, Data Mining, Algorithm Design, Computational Intelligence, Principles of Database Design, Information and Network Security

Tehran Institute of Technology (MFT)   Tehran, Iran
Full-Stack Software Engineering   May. 2018 - Nov. 2020
Courses: C# Advanced, SQL Server, ASP.NET, Front-End   *GPA: 3.9 / 4.0*
Final Project: Multimedia Messaging Web Application
Supervisor: Babak Sairafi

Allameh Tabatabaei High School   Tehran, Iran
Dip.Ed in Physics and Mathematics   Sep. 2015 – Jun. 2019
GPA: 3.9/4.0

Research Experience

Deep Semi-Supervised Image Semantic Segmentation   Aug. 2023 - Present
Computer Vision, Semantic Segmentation, Semi-Supervised, GAN
We aim on proposing a novel approach built on top of NVIDIA's SemanticGAN for more accurate Semantic Segmentation, under supervision of Alireza Esmaeilzehi.

Deep Active-Learning Object Detection   Jan. 2023 - Present
Computer Vision, Object Detection, Active-Learning, Stable Diffusion
Under supervision of Alireza Esmaeilzehi, we are developing Active-Learning Object Detection model incorporating the capabilities of a Stable Diffusion to identify irrelevant images in datasets.

Projects

Deep Semantic Segmentation for Autonomous Driving GitHub   May. 2023 - Present
For my thesis project, I am exploring a variety of lightweight models for image and video Semantic Segmentation followed by Semantic Forcasting on Autonomous Driving datasets.

ROS Robot Path Finder GitHub   Spring 2023
Crafted robot simulation within the ROS framework, integrating Vector Field Histogram for maze pathfinding and employing Yolo for traffic sign recognition and navigation in Robotics course.

Rank relative ratings of toxicity between comments GitHub   Summer 2022
Constructed an ensemble model leveraging BERT to assess the toxicity of Twitter comments in the Jigsaw dataset, securing a prominent position within the top 24% among 3000 submissions.

Industry	**BaleMessenger,** Full-Stack Data Scientist	Feb. 2022 - Present

- Responsible for Content Moderation solutions, detection pipelines and autonomous moderator systems orchestrated to deal with inappropriate and fraudulent contents on the platform.
- Actively participated in a collaborative effort to develop a Churn Prediction model, meticulously designed to discern and amplify user retention rates by learning intricate behavioral patterns.

Karlancer, Software Developer Freelancer — Jul. 2022 - Dec. 2022

- Contributed to development of production grade and pre-configured tools leveraging Docker and Kubernetes to boost provisioning efficiency of server deployments.
- Engineered an analyzer system, meticulously designed to aggregate, process, and promptly generate real-time alerts pertaining to stock market signals and price fluctuations.

Skills	
Programming: Python, Java, C#, C++, Processing	
Frameworks: Tensorflow, Keras, PyTorch, Apache-Spark, Pandas	
Technologies: Docker, Kubernetes, Apache-Airflow, Prometheus, Grafana, FluxCD, Git	
Communication: Persian (native), English (fluent, *IELTS 6.5 in 2018*), German (Novice, *A2*)	

Teaching Experience		
Principles of Database Design. Supervisor: Dr.HamidReza Shahriari	Spring 2023
Multi-Media Platforms. Supervisor: Dr.Siavash Khorsandi	Spring 2023
Algorithm Design & Analysis. Supervisor: Dr.Hamid Haj Seyyed Javadi	Fall 2022

Honors & Achivements		
Jigsaw competition top submission (Top 24%)	Kaggle - 2022
NLP with Disaster Tweets competition top submission (8%)	Kaggle - 2021
Amirkabir Artificial Intelligence Summit workshop Certificate	AAISS - 2021
Top 1% in the Nation-wide University Entry Exam	2019
Top Graduate in Advanced English	ILI - 2018

Activities		
Founder of AUT-CE and Contributor of CEDA for AUT CE courses archives	2019 - Present
Sharif Innovation Center (ICT) competitor	Sharif - 2023
Machine Learning and Data Mining instructor	Higher Education - 2023
Data Mining Competition (DMC) staff	Amirkabir - 2022
Contributor to department publications	Amirkabir - 2021

Courses & Certificates		
Data Engineer Career Track *(17 courses, 57 hours)*	DataCamp - 2023
Machine Learning Scientist Career Track *(23 courses, 94 hours)*	DataCamp - 2021
Task Oriented Artificial Intelligence and Machine Learning	Quera - 2021
Neural Networks and Deep Learning	DeepLearning.AI - 2021
Intermediate and Advanced Machine Learning	Kaggle - 2020
+7 year English Course Completion Certificate	ILI - 2018

References			
Ehsan Nazerfard *(Thesis Supervisor)*	aut.ac.ir/nazerfard	nazerfard@aut.ac.ir
Alireza Esmaeilzehi *(Postdoctoral Fellow)*		alireza.esmaeilzehi@utoronto.ca
HamidReza Shahriari	aut.ac.ir/shahriari	shahriari@aut.ac.ir
Siavash Khorsandi	aut.ac.ir/khorsandi	khorsandi@aut.ac.ir
Hamid Haj Seyyed Javadi	aut.ac.ir/sjavadi	h.s.javadi@shahed.ac.ir

Hobbies	Weekend Countryside Trips, Regular Gym Workouts and Chess Enthusiast