

Hamidreza Moaddeli

MACHINE LEARNING ENGINEER

☎ (+98) 9177012434 | ✉ hamidreza.moaddeli@gmail.com | 🏠 moaddeli.github.io | 📄 moaddeli | 📺 Moaddeli | 🐦 @hrmoaddeli

Summary

With over 10 years of experience in Machine Learning and Data Science, I am currently a Senior Machine Learning Engineer with a strong focus on developing innovative solutions. I bring more than six years of specialized expertise in Deep Learning and Machine Learning, particularly within medical and healthcare applications. My skills encompass a wide range of fields, including Natural Language Processing, Computer Vision, and Multimodal Data, enabling me to tackle complex challenges effectively. Passionate about continuous learning and improvement, I am dedicated to advancing my knowledge and delivering high-impact results in the constantly advancing landscape of AI and Machine Learning.

Professional Experience

WORK EXPERIENCE

KroniKare Pte Ltd.

Melbourne, Australia

SENIOR MACHINE LEARNING ENGINEER (REMOTE)

Apr.2022–Present

- Designed and implemented deep learning models (detection and segmentation) using PyTorch to quantify the size of 7 different tissue types within chronic wounds. This work aimed to create an automated diagnostic tool for chronic wound assessment, to ultimately support more accurate and personalized treatment planning.
- Developed a deep learning model utilizing multispectral images to predict chronic wound complications, enabling physicians to achieve more precise and faster diagnoses for improved patient care outcomes.
- Built a machine learning model to predict the effectiveness of wound care products on individual wounds based on wound size, employing various machine learning techniques and libraries.

Artin Analysis Ltd.

Shiraz,Iran

MACHINE LEARNING ENGINEER

Jul.2020–Mar.2022

- Engineered a hybrid deep learning model for segmentation and volumetric analysis of Glioblastoma brain tumors from multimodal MRI scans, implemented within a CAD software environment.

Freelance

Shiraz,Iran

FREELANCE PYTHON DEVELOPER/DATA SCIENTIST)

Sept.2014–Jul.2020

- Delivered numerous freelance projects focused on scientific computing, data analysis, and machine learning, leveraging the following technologies:
 - Python Ecosystem: SciPy, NumPy, Matplotlib, Pandas
 - Machine Learning/Deep learning Frameworks: scikit-learn, PyTorch, TensorFlow
 - SQL Databases: MySQL, SQLite

Pars Hassas Co.

Shiraz,Iran

SENIOR AUTOMATION SOFTWARE ENGINEER

Dec.2010–Sept.2014

- Developed and implemented HMI software, PLC logic, control loops, and network configurations for a variety of projects, ranging from small to large scale, utilizing Yokogawa DCS, Siemens PLC, and HIMA ESD systems.
- As a key developer, spearheaded the design and implementation of a telemetry system for the water supply network in Shiraz, one of Iran's largest cities. The system is currently in service, demonstrating its long-term reliability and contribution to efficient water management.

Pars Hassas Co.

Shiraz,Iran

AUTOMATION SOFTWARE ENGINEER

Sept.2008–Dec.2010

- Served as the lead developer for the project "Design and Development of an Advanced Monitoring System for the PSA Unit at Bandar-Abbas Oil Refinery," one of Iran's largest oil refineries.

TEACHING EXPERIENCE

Azad University of Shiraz

Shiraz, Iran

LECTURER

2009–2010

- Courses: Assembly Language Programming, Discrete Mathematics, Data Storage and Retrieval and Artificial Intelligence.

AI Saturdays

Shiraz,Iran

INSTRUCTOR

2018

- Courses: Deep Learning for Computer Vision, Practical Deep Learning.

Computer Science & Engineering Scientific Association Shiraz University

Shiraz,Iran

INSTRUCTOR

2019

- Courses: Scientific Computing with Python

- Courses: Computer Programming with Python, Scientific Computing with Python

RESEARCH EXPERIENCE

Shiraz University

Shiraz, Iran

PART-TIME RESEARCH ASSISTANT, ADVISOR: DR. F. KHUNJUSH

Sept.2009–May.2012

- Investigated various performance analysis and modeling techniques for GPU architectures.
- Applied machine learning and statistical methods to optimize and model performance, focusing on many-core architectures.

Skills

Programming Languages	Python, C/C++, Octave, R, Java, JavaScript
Data Science & Machine Learning	PyTorch, TensorFlow, Python SciPy stack (SciPy, NumPy, Matplotlib, Pandas, scikit-learn), OpenCV
Parallel Computing	CUDA, MPI, OpenMP
Tools	Docker, Git, CMake, GitHub Actions
Languages	English (Fluent), Persian (Native)

Education

M.Sc. in Computer Engineering, Software Engineering Major

2005–2008

SHIRAZ UNIVERSITY

Shiraz, Iran

- Master thesis: “*Design and Implementation of a Prototype for Resource Reservation Mechanism in Grid Environment*”
- GPA: 17.67/20.0

B.Sc. in Computer Engineering, Software Engineering Major

2000–2005

SHIRAZ UNIVERSITY

Shiraz, Iran

- Final year project: “*Design and Implementation of NACHOS in Python Programming Language*”
- GPA: 17.66/20.0

Honors & Awards

2013	SINGA Scholarship , Singapore International Graduate Award (SINGA), A*STAR.	Singapore
2008	Member of , the Iranian Elite Foundation.	Iran
2005	Ranked 1st , place in B.Sc., Computer Science and Engineering Department at Shiraz University.	Shiraz, Iran
2005	Ranked 78th , in Iranian National M.Sc. University Entrance Exam (Software Engineering Track).	Iran
2004	Ranked 31th , in Iranian National M.Sc. University Entrance Exam (Artificial Intelligence Track).	Iran
2004	Ranked 52th , in Iranian National M.Sc. University Entrance Exam (Computer Architecture Track).	Iran
2000	Ranked 24th , among more than 400,000 participants in Iranian National University Entrance Exam (B.Sc.).	Iran

Certificates

2017	Deep Learning Nanodegree Program , Udacity.	Verified Certificate
2016	Big Data Analysis with Apache Spark , edX.	
2016	Introduction to Apache Spark , edX.	
2016	Distributed Machine Learning with Apache Spark , edX.	
2015	Big Data(a two-course series) , BerkeleyX-edX.	
2015	Scalable Machine Learning , edX.	

Selected Publications & Presentations

- H. Moaddeli, “*Foundation Models*”, K. N. Toosi University of Technology, Nov. 2024.
- H. Moaddeli, “*AI in Ophthalmology*”, Poostchi Ophthalmology Research Center, Department of Ophthalmology School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran, Jan. 2020
- H. Moaddeli, G. Dastghaibyfar, and M. Moosavi, “*Flexible advance reservation impact on backfilling scheduling strategies*,” in Grid and Cooperative Computing, 2008. GCC 08. Seventh International Conference on, Oct. 2008, pp. 151–159.