Hamidreza Moaddeli

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Professional Summary

As a Principal Machine Learning Engineer with over 6 years of experience, I have led the development and deployment of machine learning models across various domains, particularly in medical applications. My expertise spans various fields, including natural language processing, computer vision, and Multimodal data. My passion for continuous learning and improvement keeps me at the forefront of the rapidly evolving AI landscape, and I am committed to delivering high-impact results that contribute to organizational growth and excellence.

Professional Experience

Work Experience

KroniKare Pte Ltd   **Melbourne ,Australia**
Senior Machine Learning Engineer (Remote)   *Apr.2022–Present*
- Designing, implementing and deploying deep learning models for segmentation and measuring different areas of chronic wounds.
- Design, implementation, and deployment of deep learning models for the detection of complications using multispectral images of the wound of the patient.

Artin   **Shiraz,Iran**
Machine Learning Engineer   *Jul.2020–Mar.2022*
- Design and deploying deep learning models for segmentation and measuring different areas Brain Tumors using Multimodal MRI scans

Freelance   **Shiraz,Iran**
Freelance Python Developer/Data Scientist   *Sept.2014–Jul.2020*
- Developing software for scientific computing and data analysis using *SciPy* Stack (*SciPy, NumPy, Matplotlib, Pandas* and *IPython Notebook.*) and *Mysql* and *SQLite* DataBases.

Pars Hassas Co.   **Shiraz,Iran**
Senior Automation Software Engineer   *Dec.2010–Sept.2014*
- Designing and implementing HMI softwares, logic programs, loop controls and network configuration for multiple small to large projects including Yokogawa DCSs, Siemens PLCs and HIMA ESDs.
- Worked as a main developer for the project *"Design and implementation a Telemetry system for water supply network of Shiraz city"*

Pars Hassas Co.   **Shiraz,Iran**
Automation Software Engineer   *Sept.2008–Dec.2010*
- Worked as a main developer for the project *"Design and development of a new monitoring system for PSA Unit of Bandar-Abass Oil Refinery"*.

Pars Hassas Co.   **Shiraz,Iran**
Part-time Automation Software Programmer   *Sept.2005–Sept.2008*

Teaching Experience

Azad University of Shiraz   **Shiraz,Iran**
Lecturer   *2009–2010*
Courses: *Assembly Language Programming, Discrete Mathematics, Data Storage and Retrieval* and *Artificial Intelligence*

Faculty of Engineering Shahid Bahonar Shiraz   **Shiraz,Iran**
Lecturer   *Fall 2005*
Courses: *Computer Graphics Lab* and *Fundamentals of Web*

Shiraz University   **Shiraz,Iran**
Teaching Assistant   *2003–2006*
Courses: *Fundamentals Of Programming (Python Programming), Discrete Mathematics, File Structures, Artificial Intelligence, Design and Analysis of Algorithms, Operating Systems Lab, Operating Systems* and *Advanced Mathematics in Computer Engineering*

Research Experience

Shiraz University   **Shiraz,Iran**
Part-time Research Assistant, Advisor: Dr. F. Khunjush   *Sept.2009–May.2012*
Research focused on:
- Studying different performance analysis and modeling methods for GPU Architectures.
- Employing Machine learning and Statistical techniques in Performance optimization and modeling (specifically for many-core architectures).

Technical and Personal skills

General Skills: Excellent communication and presentation skills, Problem solving skills with strong background in mathematics, Collaboration and teamwork skills, Self-motivated learner.

Programming Languages: Python, C/C++, Octave, R, Java, JavaScript, Angular, HTML

Data Science and Machine Learning: Python SciPy Stack (SciPy, NumPy, Matplotlib, Pandas, scikit-learn), Spark, TensorFlow, Keras, PyTorch

Programming Tools: CUDA, MPI, OpenMP, Git

Systems: Windows, Linux/Unix, Embedded Linux systems, and Container(Docker)

Language Proficiency: Fluent in English, Native in persian

Education

○ **Shiraz University** **Shiraz, Iran**
M.Sc. in Computer Engineering, Software Engineering Major, GPA: 17.67/20.0 *2005–2008*
Master thesis: *"Design and Implementation of a Prototype for Resource Reservation Mechanism in Grid Environment"*
supervisor: Dr. GH.Dastghaiby Fard

○ **Shiraz University** **Shiraz, Iran**
B.Sc. in Computer Engineering, Software Engineering Major, GPA: 17.66/20.0 *2000–2005*
Final year project: *"Design and Implementation of NACHOS in Python Programming Language"*
supervisor: Dr. A. Towhidi

Honors and Awards

○ Ranked 24th among more than 400,000 participants in Iranian National University Entrance Exam (B.Sc.), 2000.

○ Singapore International Graduate Award (SINGA), A*STAR, Singapore, January 2013.

○ Ranked 1st place in B.Sc., Computer Science and Engineering Department at Shiraz University, 2005.

○ Ranked 78th in Iranian National M.Sc. University Entrance Exam (Software Engineering Track), 2005.

○ Ranked 31st in Iranian National M.Sc. University Entrance Exam (Artificial Intelligence Track), 2004.

○ Ranked 52nd in Iranian National M.Sc. University Entrance Exam (Computer Architecture Track), 2004.

○ 4-year Exceptional Talent Undergraduate Student Award (Academic-based), 2000-2004.

○ Member of Iranian Elite Foundation, 2008-present.

Selected Courses

Deep Learning Nanodegree Program: Udacity (Online Course), November 2017 Cohort	
Big Data Analysis with Apache Spark: edX (Online Course), September 2016	*Verified Certificate: 100/100*
Introduction to Apache Spark: edX (Online Course), September 2016	*Verified Certificate: 100/100*
Distributed Machine Learning with Apache Spark: edX , August 2016	*Verified Certificate: 100/100*
Big Data(a series of two courses): BerkeleyX-edX, August 2015	*XSeries Certificate*
Scalable Machine Learning: edX (Online Course), August 2015	*Verified Certificate: 100/100*
Introduction to Big Data with Apache Spark: edX (Online Course), July 2015	*Verified Certificate: 100/100*
Design and Analysis of Algorithms: Coursera (Online Course), Spring 2012, Stanford University	*100/100*
Machine Learning: Coursera (Online Course), Fall 2011, Stanford University	*400/400*
Artificial Intelligence: Coursera (Online Course), Fall 2011, Stanford University	*97.8/100(top 10%)*

Publications and Presentations

○ **H. Moaddeli**, G. Dastghaibyfard, 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.

○ **H. Moaddeli**, "Foundation Models", *K. N. Toosi University of Technology, November 2024*

○ **H. Moaddeli**, "AI in Ophthalmology", *Poostchi Ophthalmology Research Center, Department of Ophthalmology School of Medicine, Shiraz University of Medical Sciences, Shiraz, Iran, January 2020*