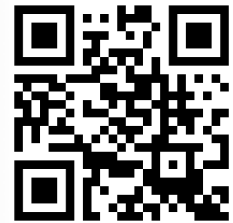


# Shahab Hamidi-Rad

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## Career Summary:

- **A problem-solving and results-oriented software architect** with 20+ years of experience designing and implementing robust, scalable software systems. Proven track record of delivering innovative solutions to complex technical challenges.
- **A proactive and passionate AI/ML expert** with 10+ years of hands-on experience delivering deep learning solutions for real-world challenges.
- **An energizing coach and mentor** committed to unlocking team potential by providing clear direction, inspiration, and support for individual growth.
- **A meticulous expert bridging the gap between research and production** and leveraging deep machine learning expertise and software development skills to deliver impactful solutions.

## Areas of Expertise:

Machine Learning	Deep Learning	NLP
Reinforcement Learning	Computer Vision	PyTorch/Tensorflow
Neural Network Compression	Python	C/C++
Swift	Java	Quantum Computing

## Professional Experience:

### InterDigital AI Lab, Los Altos, CA

2019-Present

*A technology research and development company that provides wireless and video technologies for mobile devices, networks, and services worldwide. The AI Lab examines how ideas at the leading edge of AI/ML research can be used to deliver the next generation of wireless and immersive technologies.*

### Software Architect

As a quick learner with a deep understanding of machine learning, I successfully tackled complex wireless communication challenges by developing cutting-edge deep learning models for hybrid beam-forming, channel state information compression, and AI/ML positioning.

- **Successfully represented InterDigital at MPEG NNC standard meetings**, making significant contributions to the standard. Designed and developed the "Fireball" tool, incorporating state-of-the-art compression and quantization techniques for neural networks.
- **Rapidly acquired expertise in quantum computing algorithms** and their application to wireless communication problems, culminating in a publication at a top quantum computing conference.
- **Developed a suite of machine learning tools** to streamline wireless communication research. Leveraged these tools to create innovative solutions and contribute to multiple publications in leading wireless, signal processing, and machine learning venues.

## Technicolor AI Lab, Palo Alto, CA

2015-2019

*A multinational corporation that provides creative services and technology products for the communication, media, and entertainment industries.*

### Software Architect

Joined a team of seasoned machine learning researchers to tackle challenging real-world problems. Quickly developed a deep understanding of machine learning, optimization, and deep learning, and contributed to the team's success by implementing innovative solutions and securing intellectual property.

- **Designed and implemented a robust machine learning model** to predict failures in gaming and movie media manufacturing, resulting in significant cost savings.
- **Successfully developed proof-of-concept machine learning solutions** for diverse applications including indoor localization using light fingerprints, face recognition on OTT devices, and conversational interfaces for IoT devices.

## Harmonic Inc., San Jose, CA

2006-2015

*An American technology company that develops and markets video routing, server, and storage products for companies that produce, process, and distribute video content for television and the Internet.*

### Tech Lead, Software Development Manager

Advanced to Tech Lead and Software Development Manager roles, leading a team of engineers in developing the next-generation firmware for Harmonic's "Electra" line of video encoding products.

- **Successfully addressed the problem of escalating open firmware issues** by developing a strategic approach to allocate engineering resources for both bug fixing and new feature development.
- **Successfully led a team of engineers** in the design and development of innovative new features, including Digital Program Insertion (DPI), provisioning software, and a web user interface for "Electra" encoders.

### Senior Staff Software Engineer

Started at Harmonic as a Senior Software Engineer and quickly excelled, earning a promotion to Senior Staff Software Engineer through consistent delivery of high-quality software features.

- **Designed and implemented Harmonic's statistical multiplexing** sub-system which optimizes the bandwidth usage shared by multiple channels based on the video compression complexities.
- **Identified inefficiencies in software development and testing processes** and developed custom tools to address these challenges, resulting in increased productivity and quality.

## Patents/Publications:

Please visit my personal website for:

- **Research:** <http://www.shahabonline.com/me/index.html#Research>
- **Patents:** <http://www.shahabonline.com/me/Patents.html>
- **Publications:** <http://www.shahabonline.com/me/Publications.html>

## Education:

- BS in Electronics Engineering from the K.N. Toosi University of Technology, Tehran-Iran.

## Honors:

- Rank 25 in Nationwide Mathematics Olympiad, Iran.