

## Contact

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(LinkedIn)

## Top Skills

Machine Learning  
Speech Processing  
Algorithms

## Patents

ROOM IDENTIFICATION USING  
ACOUSTIC FEATURES IN A  
RECORDING

# Howard Lei

Sr. Data Scientist at Veritone, Inc.  
Irvine, California

## Summary

A demonstrated history of working in Machine Learning and software development. Skills: Python, Tensorflow, Pytorch, deep learning, speech processing, statistical algorithms, Docker, Kubernetes, Google Cloud Platform, AWS, SQL, C/C++. Ph.D. in Electrical Engineering and Computer Science from UC Berkeley. US Citizen.

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## Experience

Veritone, Inc.  
Sr. Data Scientist  
August 2019 - Present (8 months)  
Costa Mesa, CA

Software development and implementation using the following ML frameworks/techniques: tensorflow.js, Generative Adversarial Networks (GANs), SSD meta-architecture, Kaldi speech processing toolkit, Faceswap and Deepfake technologies.

Development of CI/CD pipelines for deployment of software at-scale on cloud platforms for end-user consumption.

Arcules  
Data Scientist  
August 2017 - August 2019 (2 years 1 month)  
Irvine, CA

Researched and developed Deep Learning models, including Convolutional Neural Networks, for performing real-time object detection and classification in video data. Development and deployment of YOLOv3, SSD, and Faster-RCNN deep-neural-network meta-architectures. Use of Tensorflow, Pytorch, and Caffe frameworks, along with cloud-based services, for software development and deployment.

California State University - East Bay  
Assistant Professor - Engineering  
September 2013 - August 2017 (4 years)

Hayward, CA

Taught undergraduate and graduate-level courses, including Machine Learning in Python, Computer Architecture, FPGA Programming using Verilog, Assembly Language Programming (MIPS), Very Large Scale Integration (VLSI), Analog Circuits, Microprocessors Programming, and Introduction to Engineering.

Principal Investigator in research projects involving statistical Machine Learning, and the analysis and improvement of engineering education.

Lead efforts resulting in the ABET accreditation of the Computer Engineering program.

ICSI - International Computer Science Institute

Postdoctoral researcher

December 2010 - August 2013 (2 years 9 months)

Investigated state-of-the-art speaker recognition systems in the presence of environmental noise, and the effects of phonetic structure in acoustic models for speaker recognition. Focused on the use of statistical machine learning algorithms.

Investigated applications of machine learning for correlations of user profiles across social networking accounts, for purposes of privacy and security.

UC Berkeley

Ph.D. student

August 2005 - December 2010 (5 years 5 months)

Worked on speech processing, and in particular speaker recognition. Developed and implemented speaker recognition systems based on GMM and HMM acoustic models, and participated in the NIST evaluations. Focused on the tasks of using speaker discriminability measures for temporal data selection, as well as lexical constraining, for speaker recognition.

Google

Software Engineering Intern

June 2009 - August 2009 (3 months)

Worked on improving acoustic modeling for automatic speech recognition.

Used the Hadoop-like Distributed File System and MapReduce for Big Data processing on many-core systems.

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## Education

University of California, Berkeley

Ph.D, Electrical Engineering and Computer Sciences · (2005 - 2010)

University of Michigan

Bachelor of Engineering - BE, Electrical and Electronics

Engineering · (2001 - 2005)