

# Senior Machine Learning Engineer

---

## ABOUT

A Machine Learning Engineer with 8 years of experience in this field. Expertised in computer vision, machine learning, and image processing. Specializing in object recognition, visual search, text detection, and video content analysis, combined with a deep understanding of discriminative learning and deep learning techniques. Proficient in document content analysis, bringing a comprehensive skill set to tackle complex challenges at the intersection of technology and visual data interpretation.

## EXPERIENCE

- Developed and implemented an innovative text detection algorithm, contributing to a cutting-edge application that extracts textual information from images with remarkable precision, thereby streamlining data extraction processes.
- Successfully integrated deep learning models into multiple projects, optimizing image analysis tasks and achieving higher levels of accuracy in complex visual recognition scenarios.
- Engineered an automated document content analysis pipeline that significantly reduced manual effort and improved data extraction accuracy, providing a robust solution for handling large volumes of textual and visual content.
- Collaborated closely with multidisciplinary teams of data scientists, engineers, and domain experts.

## TECH STACK

- Python
- C++
- Matlab

## EMPLOYMENT HISTORY

### Senior Software Engineer, Machine Learning, Google

December 2018 – Present

As a Senior Software Engineer in the Machine Learning division at Google, I lead the design, development, and deployment of cutting-edge machine learning systems. Collaborating with cross-functional teams, I'm architecting and implementing scalable algorithms, optimizing model performance, and driving innovation in AI technologies.

## **Lecturer, University of California, Barkley, Haas School of Business**

August 2017 - Present

The lecturer of Applied Machine Learning in the Master of Financial Engineering Program holds a pivotal role in equipping students with the practical skills and theoretical understanding needed to apply machine learning techniques within the financial domain. My responsibilities include designing and delivering engaging lectures and developing hands-on projects.

## **Software Engineering - Machine Learning, Thumbtack**

August 2015 - November 2018

In this Software Engineering - Machine Learning role, the primary responsibilities included designing, developing, and deploying machine learning models and systems. This involved collaborating with cross-functional teams to understand business requirements, preprocessing and analyzing data, selecting appropriate algorithms, and optimizing model performance.

## **Director of Engineering - Computer Vision and Data Science, Conversant**

Mar 2014 - Aug 2015

Managed engineering teams responsible for Conversant's core technology for text, image and video content analysis and categorization. Collaborated with Product and AdOps teams to define new product features and optimize advertising campaigns. Designed, planned, developed and managed production level machine learning and computer vision systems for image, video and document content analysis. Mentored developers in software design, coding practices, computer vision and machine learning algorithms. Worked closely with the VP of Engineering and other engineering leaders to drive the technical roadmaps.

## **Lead Software Engineer - Computer Vision and Machine Learning, SET Media Inc. (Acquired by Conversant)**

December 2012 - March 2014

Designed and developed production level machine learning and computer vision systems. I was responsible for redesigning and rebuilding existing production level computer vision systems to support SET's first advertising campaigns.

## **Computer Vision Scientist, HP**

September 2011 - November 2012

Designed and developed innovative computer vision systems for Houdini/HP Sprout. I did research in object recognition and text detection for Houdini project.

### **Postdoctoral Researcher, UC San Diego**

March 2011 - September 2011

As a Postdoctoral Researcher, I contributed to cutting-edge research projects, building upon my Ph.D. expertise. My responsibilities included designing and conducting experiments, analyzing complex data sets, and developing novel algorithms or methodologies.

### **Graduate Student Researcher, UC San Diego**

October 2005 - March 2011

My responsibilities included conducting literature reviews, designing and executing experiments, collecting and analyzing data, and collaborating with fellow researchers to brainstorm ideas and troubleshoot challenges. I also played a key role in disseminating findings through presentations at conferences and contributing to research publications.

### **Engineering Intern, Honda Research Institute USA, Inc.**

July 2010 - October 2010

During my Engineering Internship, I actively participated in various projects and tasks, collaborating with cross-functional teams to gain hands-on experience. I assisted in designing and prototyping new product features, conducted testing and analysis to ensure quality and reliability, and contributed to the optimization of existing processes.

### **Engineering Intern, Google**

June 2006 - July 2008

During my engineering internship at Google, I had the opportunity to assist in debugging and troubleshooting issues, contributing to the overall improvement of products and systems at one of the world's leading technology companies.

### **Junior Specialist, UC Davis**

October 2004 - July 2005

As a Junior Specialist, I actively contributed to various projects by assisting with data collection, analysis, and interpretation. My responsibilities included conducting literature reviews, preparing reports, and collaborating with team members to implement solutions.

## **Research Assistant, University of Chile, Center for Web Research**

March 2004 - December 2004

As a Research Assistant, I conducted experiments, performed simulations, and gathered empirical insights, aiding in the formulation of new hypotheses and the refinement of existing theories.

## **EDUCATION**

### **Ph.D Computer Science, UC San Diego**

2008 - 2011

This Ph.D. focused on advancing object categorization, a fundamental task in computer vision. The program aims to develop robust techniques that locate and identify objects within images, addressing challenges like occlusion, poor quality, and background clutter. By leveraging contextual information derived from object interactions and global scene statistics, the research aims to enhance recognition accuracy, particularly in complex scenarios with multiple objects in a single scene. The goal is to contribute innovative solutions that improve the disambiguation of object appearances and elevate the performance of object recognition systems.

### **Master, Computer Science, UC San Diego**

2005 - 2008

During my Master's in Computer Science program, I immersed myself in a diverse range of subjects, from advanced algorithms to software engineering principles. Through rigorous coursework and hands-on projects, I honed my skills in designing and developing efficient software solutions.

### **Engineering, Computer Science, Universidad de Chile**

2004 - 2005

My Engineering and Computer Science program experience has been dynamic and transformative. Through rigorous coursework and hands-on projects, I've gained a deep understanding of fundamental principles and cutting-edge technologies. Collaborating with diverse teams, I've tackled real-world challenges, honed problem-solving skills, and developed a robust proficiency in coding, algorithm design, and system development.

### **B.S, Engineering, Universidad de Chile**

1999 - 2004

During my B.S. Engineering program, I gained a strong foundation in core engineering principles and practical problem-solving. Collaborating on team projects honed my communication and teamwork skills, equipped me with a diverse skill set and a solid understanding of engineering concepts essential for professional growth.