Zheng Sun

Software Engineer in Computer Vision and Deep Learning at Google

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Summary

* 9+ years of research and industrial experience in computer vision, machine learning, signal processing, sensor fusion, and their applications.
* Published over 15 papers in top-tier conferences including MobiSys, Ubicomp, IPSN, SIGCOMM, etc.
* 6 years of industrial experiences at Google, Fitbit, Nokia Research Center, and Qualcomm.
* 6 years of industrial project collaborations with Google, Intel, and Nokia.
* Extensive experience in big data analytics (using Google/Hadoop MapReduce framework).
* Strong programming skills in C++, Java, Scala, and MATLAB.
* Expertise in classification/clustering algorithms, time-domain and frequency-domain signal analytics, pattern recognition, and adaptive filtering.
* Experience in mobile application development.
* Research experience in machine learning, audio/image/multimodal signal processing, human-computer interactions, 3D point cloud perception, gesture recognition, indoor positioning, and computer vision.
* Highly self-motivated. Proven ability in independent research, teamwork, and efficient project development.
* Best Presentation and Best Demo awards winner.

Experience

Software Engineer in Deep Learning-based Computer Vision at Google

September 2014 - Present

- Launched automated large-scale video ad creation for Google Display Ads.
- Launched AI-backed (mouse-hover) video previews for YouTube.
- Work in Google's Machine Perception research team.
- Focus on large-scale visual content learning and understanding, including videos and images.

Software Engineer, Google [x], Self-driving car at Google

2014 - 2015 (2 years)

- Designed and implemented human gesture recognition algorithms and pipelines using 3D point clouds.
- Featured in Ted Talk: How a Driverless Car Sees the Road presented by Chris Urmson (my work starts at 10mins sharp into the video, https://youtu.be/tiwVMrTLUWg?t=9m57s).

Ph.D. Researcher at Carnegie Mellon University

September 2009 - August 2014 (5 years)

Research area: Machine learning and audio/image/multimodal signal processing for context-aware mobile and ubiquitous computing, human activity recognition, human-computer interactions, and indoor positioning/location recognition.

Research Intern at Fitbit
May 2013 - August 2013 (4 months)
Designed algorithms using machine learning and signal processing for the next generation of Fitbit's products.

Research Intern at Nokia
May 2012 - August 2012 (4 months)
Nokia Research Center

- Designed and implemented a novel human-computer interaction technique.
- Developed a Windows Phone prototype application for device interactions.

Research Intern at Qualcomm
May 2010 - August 2010 (4 months)
Designed and implemented a SLAM (Simultaneous localization and mapping)-based indoor navigation and localization system using machine learning and signal processing techniques.

Education

Carnegie Mellon University
Ph.D., Electrical and Computer Engineering, 2009 - 2013
Beijing University of Post and Telecommunications
Master of Science (M.S.), Signal & Information Processing, 2006 - 2009
Beijing University of Post and Telecommunications
Bachelor of Engineering (B.E.), Mechanics & Automation, 2002 - 2006
Activities and Societies: Grid Computing Competition Team (team lead)
Beijing Foreign Language School
High School, 1999 - 2002
Beijing Foreign Language School
Middle School, 1996 - 1999

Honors and Awards

Best Ph.D. Forum Presentation Award, Best Demo Award, Carnegie Institute of Technology Dean's Fellowship, Outstanding Graduate Student Award, 1st Prize, Sony Corp. Scholarship, 1st Prize, China's National Scholarship, 1st Prize, Alumni’s Outstanding Student Scholarship, ACM MobiSys 2013 Travel Award, ACM Ubicomp 2011 Travel Award, ACM SIGCOMM 2011 Travel Award, IEEE PerCom 2011 Travel Award

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Contact Zheng on LinkedIn