

EXPERIENCE

GOOGLE

ENGINEERING MANAGER / SENIOR SOFTWARE ENGINEER

2014 - Present

Eng Manager / Tech Lead, Google Health Data Labeling Platform

- Grew from zero to 10+ SWEs, serving health data labeling needs for 10+ teams across Google / Alphabet
- Generated xxM labels with xxxK labeling hours from graders across the globe
- Unblocked xx critical launches and xx publications on Nature, Lancet, JAMA, etc.

Eng lead, Actions On Google (AoG) Console backend

- AoG is the third party developer platform for Google Assistant
- Led the effort from the ground up to the first launch

Eng lead, Firebase Console backend

- Firebase is Google's flagship offering for app development
- Led the effort from the ground up to the first launch

TWITTER

INTERN, SOFTWARE ENGINEERING

2013

Designed and implemented a tweet recommendation service

- Utilized content-boosted collaborative filtering with random walk model on Hadoop / Storm

HULU

INTERN, SOFTWARE ENGINEERING IN TEST

2010

Developed recommendation system unit tests in Ruby & Java

EDUCATION

CANADA

UNIVERSITY OF WATERLOO

2012 - 2014

Master of Mathematics, Computer Science

Thesis: Path Integration with Velocity-Controlled Oscillators

Relevant courses: Computational Neuroscience, Applied Machine Learning, Probabilistic Inference and Machine Learning

2011 - 2012

Exchange Student, Computer Science

Thesis: Hippocampus Modeling on Spatial Alternation Task

Relevant courses: User Interfaces, Machine Learning, Algorithms, Computer Vision

CHINA

TSINGHUA UNIVERSITY

2008 - 2012

Bachelor of Engineering, Computer Science and Technology

Relevant courses: Artificial Intelligence, Operating System, Network, Computer Architecture, Data Structures

PUBLICATIONS

COMPUTATIONAL NEUROSCIENCE

X. Ji, S. Kushagra, J. Orchard, "Updating the Entorhinal Cortex Fourier Model with Visual-Sensory Input", *Canadian Conference on Artificial Intelligence (AI) 2013*.

J. Orchard, H Yang, **X. Ji**, "Does the Entorhinal Cortex use the Fourier Transform?", *Canadian Conference on Artificial Intelligence (AI) 2013*.

COGNITIVE NEUROSCIENCE

B. Liu, G. Wu, Z. Wang, **X. Ji**, "Semantic integration of differently asynchronous audio-visual information in videos of real-world events in cognitive processing: An ERP study", *Neuroscience Letters*, July 2011.

PROJECTS

COMPUTATIONAL NEUROSCIENCE

Modeling Path Integration Using Velocity Controlled Oscillators

- Simulated rat's hippocampus using ~50,000 virtual neurons
- Built a virtual rat that is able to navigate in a 2D space
- Included stabilizing mechanisms and sensory inputs

MACHINE LEARNING

Multi-level Position Reconstruction from Hippocampal Place Cells

- Implemented Bayesian networks on ~20GB neural data
- Designed multiple feature levels for faster and more accurate learning
- Average error reduced to 1/3 of previous results

Private Learning with Homomorphic Encryption

- Reviewed different private machine learning approaches
- Discussed the difference of schemes and algorithms
- Evaluated algorithm efficiency based on feature amount and data size

QUALIFICATIONS

EXPERTISE

Full stack development with backend specialty
Team lead of 10+ engineers
Industrial experience in healthcare + tech
Computational neuroscience

PROGRAMMING LANGUAGES

Java, Python, C++, JavaScript, TypeScript

Last update: 2021-10-08