XIANG JI

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EXPERIENCE

GOOGLE — **ENGINEERING MANAGER / SENIOR SOFTWARE ENGINEER**

2017 - Present

Eng lead, Google Health Data Labeling Platform

- Grew from zero to 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.

GOOGLE — **SOFTWARE ENGINEER**

2014 - 2017

Eng lead, Actions On Google (AoG) Console backend

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

Eng lead, Firebase Console backend

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

TWITTER — **INTERN, SOFTWARE ENGINEERING**

2013

Designed and implemented a real-time 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: 2021-10-07