

Xinwei (David) Yao

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[Address redacted]

EDUCATION

Stanford University

Ph.D in Computer Science
expected June 2023 | Stanford, CA

Yale University

B.S. in Intensive Mathematics and
Computer Science
summa cum laude. 3.99/4.00
May 2016 | New Haven, CT

Nanjing Foreign Language School

June 2012 | Nanjing, China

SKILLS & INTERESTS

Computer Science

Distributed Systems
Computer Vision & Graphics
Machine Learning
Software Engineering

Math

Measure Theory & Probability
Spectral Graph Theory
Real & Complex Analysis
Abstract Algebra

Programming

Git • C/C++ • Python • JavaScript •
Haskell • Ruby • Matlab • \LaTeX

Languages

Native Chinese • Fluent English •
Proficient Spanish

Interests

Film • Spanish • Linguistics

RESEARCH

Stanford Computer Science | Research Assistant

Sep 2018 - Present | Stanford, CA

- First-year rotations on
 - Face tracking in film special effects, advised by Ron Fedkiw at **AI Lab**.
 - Large-scale video analytics systems, advised by Kayvon Fatahalian at **Graphics Lab**.
 - Talking Head Video Synthesis, advised by Maneesh Agrawala at **Brown Institute**.

Yale University | Research Assistant

Feb 2015 - May 2016 | New Haven, CT

- Designed and implemented software systems AnnoPred [1] and GenoWAP [2] to leverage functional annotations in genetic applications, advised by Qiongshi Lu at **Yale School of Public Health**.
- Senior thesis on the hardness of approximating l_0 -regularization of 2-Laplacian minimization, advised by Daniel A. Spielman at **Yale Institute of Network Science**.

INDUSTRY

Google LLC | R&D Intern

June 2019 - Sep 2019 | Sunnyvale, CA

- Intern on Video Intelligence team in **Google Cloud AI**.

Google LLC | Software Engineer

Aug 2016 - July 2018 | New York, NY

- Worked in **C++** on a planet-scale Search Engine platform that consumes indices of trillions of documents to answer tens of millions of search queries per second, powering WebSearch, YouTube and hundreds of other Google products.
- Collaborated with product teams who use the platform, improved hotel search latency by **50%** and WebSearch tail latency by up to 5%, and reduced Google Now cards serving cost by **25%**. Co-led the private-data working group with expertise on safe-handling of user data and **GDPR**-compliance in the Search Engine.
- Taught internal courses on Machine Learning, **Tensorflow**, and WebSearch overview to hundreds of Google engineers and received over **95%** favorable rating.
- Consistently received **superb** performance ratings (top 4%) during my 2nd year.

HONORS & AWARDS

2019.01	Stanford	First Place in CS230 Deep Learning Final Project Prizes
2016.05	Yale Residential College	JE Fellows' Prize for Highest Academic Standing
2016.05	Yale Math Department	DeForest Senior Mathematical Prize
2014.12	United States	Honorable Mention in Putnam Math Competition, 63 rd /4320
2014.09	Yale	1 of 10 Junior Inductees to Phi Beta Kappa Society
2014.04	Yale	Yale CIPE Fellowship for the Study of Latin America

PUBLICATIONS

- [1] Y. Hu, Q. Lu, R. Powles, X. Yao, C. Yang, F. Fang, X. Xu, and H. Zhao. Leveraging functional annotations in genetic risk prediction for human complex diseases. *PLOS Computational Biology*, 13(6):e1005589, June 2017.
- [2] Q. Lu, X. Yao, Y. Hu, and H. Zhao. GenoWAP: GWAS signal prioritization through integrated analysis of genomic functional annotation. *Bioinformatics*, 32(4):542-548, Feb 2016.

TEACHING

2018.05-2018.06	Instructor	New Googler Orientation: Life of a Query (How Search Works)
Spring 2016	Grader	Yale MATH 370: Galois Theory
Spring 2016, Spring 2015	Peer Tutor	Yale CPSC 365: Design and Analysis of Algorithms
Fall 2015	Peer Tutor	Yale CPSC 202: Mathematical Tools for Computer Science