

XINYI XIANG

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Xinyi's Website

University of Washington
185 Stevens Way,
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EDUCATION

B.S. University of Washington, Statistics May 2022

B.A. University of Washington, Linguistics with Honors May 2022
Concentrated track: Computational Linguistics

Minor in Mathematics

RESEARCH EXPERIENCE

My research includes implementing **mobile analytical units** on cognitive well-being, tracing cultural philological development with **natural language processing**, and performing complexity-reduced predictions for sustainable **system architecture design**. I am fortunate to work closely with colleagues in computer science, bioengineering, and linguistics, in addition to several outstanding clinical collaborators from University of Washington Medicine, College of Arts and Sciences, and Stanford Medical School.

Below are the research projects I have been directly involved in with author-level contributions.

Mobile Analytical Units

Cognistic: Neurological Degenerative Disease Detection (Project Lead) 06/2019 - Present

- Implement Apple ResearchKit, CareKit for accessible trials in prevention for Parkinson's, dementia and ALS
- Design to analyze motion and gestures on mobile devices
- In collaboration with colleagues from Stanford Medical School and Google

Feel Better: Intelligent Journal and Mood Tracking (Project Lead) Sep 2019 - Present

- Implement Google Firebase, Azure object recognition and sentiment analysis
- Convert textual data to interpretable scales and reducing unclearness
- In collaboration with colleagues at UW Allen School of Computer Science

Natural Language Processing

UW Undergrad Research Assistant

10/2020 - Present

Linguistics Importance in Cognitive Development Analysis on Post-War Taiwanese Children
Mentor: Jing Xu

- Design algorithms for natural language topic modelling in bilingual corpora
- Approach statistically on cognition reflective psycholinguistic pragmatics
- Collaborate with colleagues from UW Allen School of Computer Science

System Architecture Design

University of Texas Health School Research Assistant 03/2020 - 09/2020
UT Health Science Center

- Design algorithm for generate time series analysis with Recurrent Neural Networks
- Build economic optimization models taking consideration of SARS-CoV-2 influences
- Incorporate graphical data filtration and model selection with Swift

Tsinghua Tongfang Metadata Center 06/2019 - 09/2019
Algorithm Engineer

Real-time Traffic Congestion Detection with SIGHTA Regression Network

- Create automated system for differentiating labelled/unlabelled image data
- Fine-tuning model with Tensorflow, Caffe and Residue-Network
- Revise IEEE presentation and improve communication precision

HONORS AND AWARDS

Google COVID-19 Research Fund 2020
Cognistic(previously TrialX): A neurodegenerative disease prevention app

Stanford Biodesign Best App 2020

Microsoft Imagine Cup Semi-Finalist 2019
Feel Better: A smart journal which tracks emotional fluctuation

AP Scholar with Distinction Award 2019
Granted to students who receive an average score of at least 3.5 on all AP Exams taken, and scores of 3 or higher on five or more of these exams.

Excellence in Statistics 2019
Awarded one out of the Class of 19'

Washington and Lee University Alumni Book Award 2018
Awarded one out of the Class

PRESENTATIONS AND INVITED LECTURES

In preparation

Brown University Institute for Computational and Experimental Research in Mathematics,
“Applications of Rough Paths: Computational Signatures and Data Science” 2021

Presented sessions

Google Demo Day, “Neurodegenerative Disease Prevention Detection Application” 2021

DubHacks, “Data and ML with BigQuery”, in affiliation with Google Developers 2020

Google Developer Student Clubs, “Git Command Logics and CLI Applications” 2020

Mobile Development Club, “Projected Values and Binding Property Wrapper” 2020

LANGUAGES

Mandarin Chinese: Native Language

English: Fluent Speaker, Listener, Reader and Writer

French: Intermediate Listener, Intermediate Speaker, Advanced Reading and Writing

Japanese: Novice Listener, Intermediate Speaker, Advanced Reading and Writing

COMPUTER SKILLS

Ordered by familiarity

Programming: Java, Python, C/C++, Swift, Assembly, Clojure

Applications: MATLAB, R Studio, XCode

Platforms: Git, LaTeX, Linux, Tensorflow, Caffe

PROFESSIONAL AFFILIATIONS

Google Developer Student Clubs 07/2020-Present
Lead at University of Washington

Google Women Techmaker 08/2020-Present
Ambassador and Local Director in Pacific Northwest

Mobile Development Club at UW 09/2019-Present
Co-Founder and Lead of Project Management

PROFESSIONAL SERVICE

Symposium Co-Organizer
TechX Academy Deep Learning Course, Shanghai, 2019 - 2020

TechX Academy Sound Production Workshop, Shanghai, 2019 - 2020

Peer-Reviewed Publications:

[1] 2019 IEEE ICEIEC Real-time Traffic Congestion Detection with SIGHTA Regression Network.

OTHER

Host and Broadcast: Hua Voice Under Student Publication Department at UW

Citizenship: People's Republic of China