Xinyuan (Henry) Li

(+1) 4434544299 • xinyuan.li1301@gmail.com, xli257@jhu.edu
github.com/HSTEHSTEHSTE

Education

Johns Hopkins Whiting School of Engineering **Baltimore, Maryland**

MSE in Computer Science *2021–2022(projected)*

Focus on language and speech processing. Course highlights : Natural Language Processing, Machine Translation, Speech and Auditory Processing, Phonology

University of Oxford **Oxford, United Kingdom**

BA Mathematics and Computer Science *2016–2019*

Course highlights : Computer Architecture, Machine Learning, Databases, Artificial Intelligence, Functional Programming, Topology and Groups, Algebraic Number Theory, Galois Theory, Linear Algebra

Experience

Work Experience

Graduate Research Student with Prof. Hynek Hermansky **Baltimore, Maryland**

Johns Hopkins University Center for Language and Speech Processing *Sep. 2021–Present*

— Primary focus of the lab is Automatic Speech Recognition. My work has been on addressing the problem of catastrophic forgetting, an problem that is common to neural models that are trained domain-incrementally, or time-incrementally.

— Current project : Elastic Weight Consolidation for Continual Learning in Automatic Speech Recognition.

— Planned projects : Knowledge Distillation in ASR ; End-to-end generation of speech with different noise types and levels ; Exploring alternative non-Euclidean word embeddings and their effects on machine translation ; Study attention partterns in attention-based neural ASR.

Web Developer (Part time) **Remote**

Oxford Global Education Development Ltd. *Jan. 2021–Present*

— Full-stack development of Oxford Global Model United Nations application portal : https ://apply.oxfordglobal.org/landing

— Worked closely with conference organisers and potential clients on improving UI and user experience.

Architecture Intern **Shanghai, China**

NVIDIA *Oct. 2019–Jan. 2021*

— Took part in the development and maintenance of deep learning acceleration kernel library.

— Was part of the team that went through the full development cycle of a new version of the said library. Implemented important functionalities as well as quality-of-life improvements.

— Developed and maintained testing infrastructure for evaluating above-mentioned library. Participated in the design of CI/CD flow of the project.

Quantitative Analyst Intern **Shanghai, China**

Haitong Securities *Jul. 2019–Sep. 2019*

— Developed and automated quantitative analysis tools.

Web Developer (Part time) **Oxford, United Kingdom**

Oxford Educational Cloud *Feb. 2017–Nov. 2017*

— Launched the website of the education technology start-up.

— Wrote articles and provided counselling on the topic of applying to universities in the UK and in the US.

Teaching Assistant, English class for kids aged 3-6 **Shanghai, China**

EF Shanghai *Jun. 2013–Sep. 2014*

— Focused on teaching basic English phonetics and simple vocabulary.

— Gained some early insights on language acquisition.

Other

Director General — **Oxford, United Kingdom**
Oxford Global Education Development Ltd. — *Feb. 2019–Dec. 2019*
— Part of the executive committee at Oxford Global in charge of making strategic decisions for the organisation, overseeing the budget, and coordinating international events.

Seminar TA — **Shanghai, China**
Harvard Summit for Young Leaders in China — *Aug. 2018*
— TA for Introduction to Topology. Students were aged 14-18 with varying mathematical backgrounds.

Volunteer — **Los Angeles, United States**
Special Olympics World Games 2015 — *Aug. 2015*

Projects

Elastic Weight Consolidation for Continual Learning in Automatic Speech Recognition — **JHU CLSP**
Preliminary results show that EWC can effectively address catastrophic forgetting — *Sep. 2021–Present*

Multi Politeness-domain Neural Machine Translation for Japanese and Korean — **JHU, Term Paper**
Jointly trained on politeness domain identification and translation — *Nov. 2021–Present*

The Phonology of consonant voicing in Shanghainese — **JHU, Term Paper**
Waveform study ; perception study — *May. 2021*

Approximate solutions for the Multi-Commodity Flow problem : a survey — **JHU, Term Paper**
Interior point algorithms ; Subproblems of general MCF ; MCF in special graphs ; Rounding techniques — *May. 2021*

Scriptable racing simulator — **Oxford, Group Project**
Unity-powered racing game with Python API — *May. 2017*

Programming background

Python : Highly proficient — *package highlights : pandas, numpy, tensorflow, pytorch*

C++ : Highly proficient — *highlights : CUDA, jinja*

Other programming languages : Java, Javascript, Angular, Matlab, C, X86, Scala, Haskell, SQL, Perl, bash

Notable projects, past and present :

— JHU marketplace : buy/sell/rent marketplace webapp for JHU students
— News-api : keyword-based news crawling and curating script
— Voice and background music-control rave goggles : entry to Oxford Hack 2018
— Landscape, transportation and trade simulator : personal project on github

Languages

Chinese(Mandarin), Chinese(Shanghainese) : Native

English, French : Fluent(speaking, reading, writing)

Italian, Arabic : Basic(speaking, reading, writing)

Awards

— Best Floor Speech, Emergency Debate at the Oxford Union, Feb. 2018

— Finalist(Highest achievable award), Oxford Hack, Nov. 2018