

ALEXANDER K. GUO

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📍 Cambridge, MA

SKILLS

Coding

Proficient: Python (inc. numpy, Pandas), Java, MATLAB, Objective-C, Mathematica

Moderate: UNIX Shell, HTML, CSS, Go, Git, Javascript, Bluespec BSV, Assembly

Design

Proficient: ArcGIS, Adobe Premiere, Photoshop, Illustrator, Lightroom, Final Cut Pro X

Moderate: Final Cut Pro 7, Adobe Indesign

LEADERSHIP

Chinese Students Club

Co-President 2020-

Social Chair 2019-2020

Organized many large events including mixers and study breaks and a 1000-person intercollegiate event.

MIT China Dev. Initiative

Co-President 2019-2020

Organized annual Initiating Mutual Understanding through Student Exchange conference, promoting China-US cultural collaboration

HONORS

STEM

US Patent USPTO 9,114,285 B2

Chinese patent 201310097897

4-time American Invitational Math Exam (AIME) qualifier

Videography

2-time All American HS Film Festival Finalist

Hotchkiss Int'l Film Fest Finalist

EDUCATION

Massachusetts Institute of Technology 2017-2021 (*Senior*)

GPA: 5.0/5.0. B.S. in Computer Science + B.S. in Urban Studies and Planning

Advanced classes: Algorithms II, Machine Learning, Systems Engineering, Software Construction, Computational Photography, Data Visualization, Geographical Information Systems, International Development, Chinese Foreign Policy, Transportation Systems Analysis, Designing Airport Systems

Deerfield Academy 2014-2017

Deerfield, MA. Valedictorian

Cum Laude Society. 5 in 12 Advanced Placement Tests. 35 in ACT

EXPERIENCE

Google *Software Engineering Intern*

Mountain View, CA, Jun 2020 - Aug 2020 (Remote)

Designed and programmed a full computer vision pipeline from scratch to detect optimal areas of ad placement in YouTube videos. Worked with OpenCV for face and text detection, human pose estimation, instance segmentation, and movement and variance detection.

Braze *Software Engineering Intern*

New York, NY, Jun 2019 - Aug 2019

Contributed to improvements to the Braze iOS SDK and test app Stopwatch in Objective-C, including new features for iOS 13 and notched phones

OSIsoft *Data Science Intern*

San Leandro, CA, Jan 2019 - Jan 2019

Parsed free flowing text and screenshots from tech support cases to retrieve information from hundreds of thousands of cases. Used Optical Character Recognition (OCR) to extract info from images

Wasabi *Software Engineering Intern*

Boston, MA, Jun 2018 - Aug 2018

Produced a streamlined health monitoring system for subsystems of the company's hot cloud storage service.

PROJECTS

Transport Connectivity of China

Personal Project, 2020

Analyzed transport infrastructure data with Python and Pandas from China's 2800+ counties to determine optimal travel time and mode (rail, road, air) between all provincial capitals and counties. Designed an interactive website (<http://picrazy2.github.io/chinaconn>) to visualize results

Predicting Travel Mode Choice with Learning Classifiers

Department of Urban Studies and Planning, MIT, 2019-2020

Analyzed various machine learning techniques for predicting travel mode choice through a comprehensive literature review

Urban Interaction Classification with Computer Vision

City Science Lab, Massachusetts Institute of Technology, 2018-2019

Used machine learning algorithms to classify people in CCTV images and determine if two people are interacting with each other