

Brian Xi

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EDUCATION

University of California, Berkeley

Graduating May 2024

Bachelor of Arts in Computer Science, Minor in City Planning

GPA: 3.6

- **Relevant Coursework:** Optimization Models, Algorithms, Discrete Mathematics and Probability, Data Science, Data Structures, Linear Algebra and Differential Equations, Machine Structures, Introduction to City Planning
- **Organizations:** The Student Advocate's Office, The Berkeley Forum
- **Honors:** O4U Tech Conference Attendee (2021, 2022), Cal Alumni Association's Leadership Award (2020)

PROFESSIONAL EXPERIENCE

Amazon Web Services

May 2022 - Aug 2022

Software Development Engineer Intern (Mentor: Param Bidja)

Seattle, WA

- Work on Amazon HealthLake, a service that stores, analyzes, and queries healthcare data using machine learning
- Redesign HealthLake feature that uses natural language processing to generate health data from medical text, after which the data is converted into the international FHIR standard, which governs how health data is stored and sent
- Improve feature scalability so that up to 770 FHIR resources can be created each second with 99.9% availability

U.S. Department of Transportation Volpe Center

May 2021 - Jan 2022

Data Science Intern (Mentors: Alexander Epstein, Eric Englin)

Cambridge, MA

- Developed crowdsourced vehicle blind spot measurement app using Django framework with 100+ vehicle records in order to prevent vulnerable road user fatalities involving large trucks
- Implemented functionality that saves photos using Cloudinary and Airtable APIs to validate crowdsourced entries
- Built scalable data visualizations and HTML table with 5+ filters using D3.js and DataTables libraries to empower users to analyze vehicle data, viewable at <http://blindzonecalculator.herokuapp.com/visualize>

Study Breaks

May 2020 - Sep 2020

Writing Intern

San Antonio, TX

- Published 16 long-form articles, totalling over 10,000+ pageviews, on popular culture and trending media
- Writing portfolio available at <https://studybreaks.com/author/brian-xi-university-of-california-berkeley>

RESEARCH

Global Policy Lab

Jan 2022 - Present

Research Assistant (Mentors: Simon Greenhill, Solomon Hsiang)

Berkeley, CA

- Work on the Aerial History Project, which uses machine learning techniques on a unique archive of aerial images taken by 20th century British surveyors to study environmental change and human development
- Convert 50+ aerial images of the Caribbean into robust mosaics by annotating for roads, buildings, and then georeferencing each image using QGIS so that the mosaics can be compared against modern satellite imagery

Arizona State University

Nov 2019 - May 2020

Urban Design Research Intern (Mentor: Paul Coseo)

Tempe, AZ

- Conducted a 10-week research project to improve thermal comfort in Tempe's public parks
- Co-authored a draft of the 54-page Cool Parks and Paths Guidelines, intended for Tempe's 2nd Climate Action Plan

ADDITIONAL INFORMATION

Languages: Python (NumPy, Pandas), Java, C, SQL, HTML, CSS, JavaScript, R

Technologies/Software: AWS, Git, Heroku, Django, Jupyter, Scikit-learn, D3.js, Adobe Illustrator

PUBLICATIONS

Jared Young, Alyssa Brodeur, Angie Byrne, Clark Calabrese, Leila Cestic, Matt Isaacs, Eric Englin, **Brian Xi**, Theresa Sheehan, Yusuke Yamani, Alexander K. Epstein, and Donald L. Fisher. [Heavy Duty Truck and Pedestrian Crashes at Signalized Intersections: Comparison of High-Vision and Low-Vision Cab Drivers' Performance on a Driving Simulator.](#) *Transportation Research Record*, 2022.

Alexander Epstein, Scott Lian, Ana Vargas, Andrew Breck, and **Brian Xi**. [Clean Fleet Transition Plan.](#) 2022.

Paul Coseo and **Brian Xi**. [Draft - Tempe Cool Parks & Paths Design Guidelines 1.0.](#) 2020.