

# Caleb Ren

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## EDUCATION

### HARVARD UNIVERSITY

A.B., Statistics, Secondary in Computer Science

GPA: 3.7/4.0; Relevant Courses: Data Structures & Algorithms; Big Data & Machine Learning; Applied Linear Algebra & Big Data; Generalized Linear Models; Stochastic Processes; Dimension Reduction; Corporate Finance Accounting

Cambridge, MA

May 2021

### BELLEVUE HIGH SCHOOL

GPA: 3.97/4.0; ACT: 36/36

Bellevue, WA

May 2017

## TECHNICAL SKILLS

**Programming Languages:** R, Python, MATLAB, Java, C, JavaScript, D3.js, React, HTML/CSS, SQL

**Productivity and Creativity:** Adobe Photoshop, Lightroom, InDesign, Illustrator; Excel (adv.)

## EXPERIENCE

### EF Education First

*EF360 Management Intern (Data Science)*

Boston, MA

May 2019 – August 2019

- Optimize customer journey and track drop-off points in the purchase funnel by conducting A/B testing using SiteSpect
- Develop predictive models for hotel operating costs, customer return rates, and internal metrics using both parametric and non-parametric methods (PCA, LASSO/Ridge regression, tree classification methods)
- Generate actionable recommendations from data analysis to reduce hotel operating costs by \$100K+ per year

### Trendy.com

*Technical Consultant*

Seattle, WA

Dec 2018 – Feb 2019

- Oversaw technical design for an interactive art exhibition for a major New York art gallery involving C++ and JavaScript
- Ported medical education software including an MRI photo recognition trainer for use by 1,000+ medical students

## LEADERSHIP

### Harvard College Association for U.S.-China Relations (HAUSCR)

*President and Director of Technology*

Cambridge, MA

Sep 2017 – Present

- Lead 50-member \$1MM non-profit in formulating long-term strategic plans, developing software tools, and spearheading organization-wide projects to improve efficiency
- Adapt 3 conferences with total attendance of 15K+ students to online formats in wake of the global COVID-19 pandemic
- Direct 250 US and Chinese volunteers to provide educational exposure for 10K+ high schoolers across the 4 largest Harvard-run conferences and research competitions in Asia, accounting for 1/3 of annual Harvard acceptances from mainland China

### Harvard College Data Analytics Group

*Project Lead*

Cambridge, MA

Mar 2020 – May 2020

- Lead 5-person team during the COVID-19 global pandemic to develop visualizations and data modeling for the City of Miami Gardens to increase information and COVID-19 testing access for communities of color
- Generate interactive web visualizations for Department of Public Health epidemiological datasets

### Harvard College Consulting Group

*Case Team Leader*

Cambridge, MA

Feb 2018 – January 2020

- Led 6-person team to develop entry plans for new data storage and servicing offerings for a Fortune 500 tech company
- Advised market entry for a Global 500 company by analyzing total available market, barriers to entry, and client competencies
- Conducted focus groups and market analysis to determine product offerings, branding strategies, and value propositions for clients with a combined market capitalization of \$5.2T+ since 2016

## PROJECTS

### "Spherelets" – Dimension Reduction Paper

Oct 2019 – Dec 2019

- Authored a 20-page paper on the theory and applicability of sphere-based statistical learning techniques (spherelets)
- Extended spherelets to denoise real-world MNIST handwritten digits data, outcompeting state-of-the-art techniques

### CleanSlate – Code for Boston

July 2019 – Oct 2019

- Worked within a 15-person team *pro bono* to develop a criminal-record expungement tool for Citizens for Juvenile Justice
- Developed a text processing script to parse 11,000+ PDFs, supplanting manual data entry task

### "That's A Mood"

Oct 2018 – Dec 2018

- Led team in implementing website creation, database management, and embedded systems programming for a public art installation targeting student mental health representation on campus
- Featured in Harvard John A. Paulson School of Engineering and Applied Science's quarterly newsletter as a standout project