# Caleb Ren

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## EDUCATION

**HARVARD UNIVERSITY** Cambridge, MA
A.B., Statistics, Secondary in Computer Science May 2021
GPA: 3.7/4.0; Relevant Courses: Big Data & Machine Learning; Dimension Reduction; Functional Programming; Linear Models

**BELLEVUE HIGH SCHOOL** Bellevue, WA
GPA: 3.97/4.0; ACT: 36/36 May 2017

## TECHNICAL SKILLS

**Programming Languages:** R, Python, MATLAB, Java, C, JavaScript, HTML/CSS, Jekyll, SQL, OCaml, Google Apps Script
**Productivity and Creativity**: Adobe Photoshop, Lightroom, InDesign, Illustrator; Excel (adv.)

## EXPERIENCE

**EF Education First** Boston, MA
*EF360 Management Intern (Data Science)* May 2019 – Present
- 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** Seattle, WA
*Technical Consultant* 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

**Tsinghua University – School of Environment** Beijing, China
*Harvard-China Project Research Assistant* June 2018 – Aug 2018
- Delivered actionable recommendations to urban planners to increase rooftop photovoltaic cell collection efficiency by 20%
- Modeled solar energy potential in Beijing using ArcGIS, GLAS, and IceSAT data, factoring in urban canopy effects

## LEADERSHIP

**Harvard College Association for U.S.-China Relations (HAUSCR)** Cambridge, MA
*President and Director of Technology* 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
- 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
- Design new global marketing across domestic and international social media to boost annual student registration by 120%
- Lead 7-person team to create and market a video series developing academic research skills over a period of 6 days for an audience of 1,500+ Chinese high schoolers

**Harvard College Consulting Group (HCCG)** Cambridge, MA
*Case Team Leader* Feb 2018 – Present
- Lead 6-person team to develop entry plans for new data storage and servicing offerings for a Fortune 500 tech company
- Advise market entry for a Global 500 company by analyzing total available market, barriers to entry, and client competencies
- Conduct 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 Term 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