

J. BLAKE BULLWINKEL

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EDUCATION

Harvard University , Cambridge, MA	Expected June 2022
M.S. in Data Science. GPA 4.0/4.0	
<i>Relevant coursework:</i> Data Science I & II, Machine Learning, Artificial Intelligence, Systems Development.	
Williams College , Williamstown, MA	June 2020
B.A. in Mathematics and Chinese. GPA 3.83/4.0 (<i>cum laude</i>)	
University of Oxford , Oxford, UK	June 2019
Attended as a visiting student as part of the selective, year-long Williams-Exeter Program at Oxford.	
UWCSEA (East Campus) , Singapore	June 2016
IB Diploma. Highest grade (7) in HL math, physics, chemistry, Chinese. Class of '16 Graduation Student Speaker.	

PROFESSIONAL EXPERIENCE

Marble , <i>Co-Founder</i>	Summer 2020 to Present
<ul style="list-style-type: none">Developing an eco-social app that uses ML and NLP to estimate carbon footprint from grocery purchases.Accepted into the 2021 Harvard i-lab Spring Venture Program and leading a team of three (getmarble.app).	
Institute for Human and Machine Cognition , <i>Data Science Intern</i>	Jan 2020
<ul style="list-style-type: none">Used Python and PostgreSQL for cleaning, management and visualization of flight simulation data.Used hypothesis testing to justify correlations between physiological indicators in pilots and flight performance.	
Zola Electric , <i>Digital Platforms Intern</i>	Summer 2019
<ul style="list-style-type: none">Conducted software and sales model market research and presented novel findings to a global team of engineers and product managers aimed at providing more competitive solar energy access solutions to sub-Saharan Africa.Queried time series data to identify transaction delays within Zola's software platform using MySQL.	

TECHNICAL PROJECTS

Wildfire Risk Prediction & Response Optimization , Cambridge, MA	Dec 2020
<ul style="list-style-type: none">Trained tree-based classification models on historical wildfire and weather data to predict wildfire risk in California.Leveraged MIP to determine the optimal assignment of limited firefighters across the state, based on total cost.	
Predicting the Outcome of the 2020 Election , Cambridge, MA	Dec 2020
<ul style="list-style-type: none">Tuned k-NN and ridge-regularized logistic regression models using cross-validation to predict the 2020 election.Evaluated model fairness with FPR and analyzed possible COVID effects by using unemployment as a proxy.	
DreamDiff Python Package , Cambridge, MA	Dec 2020
<ul style="list-style-type: none">Led a team of three to develop a Python package that implements forward-mode automatic differentiation.Added extensions for root-finding, optimization by gradient descent, quadratic splines, and visualization methods.	

LEADERSHIP EXPERIENCE

Exeter College Boat Club , Oxford, UK, <i>Men's Captain</i>	Nov 2018 to June 2019
<ul style="list-style-type: none">Elected to lead the Exeter College Boat Club as the men's rowing captain during year abroad at Oxford.	
Williams College , Williamstown, MA, <i>Chinese Teaching Assistant</i>	Sept 2017 to May 2020
<ul style="list-style-type: none">Selected by Chinese department to act as a salaried assistant to professors through 1:1 tutoring sessions.	

HONORS AND AWARDS

PepsiCo Data Science Challenge grand prize winner among 250+ contest participants	2020
Goldberg Prize in Mathematics for the best mathematics colloquium (department-wide senior prize)	2020
Linen Prize in Chinese for achieving distinction in Chinese (department-wide senior prize)	2020
Carolyn Korthals Altes Scholarship for academics and potential to contribute to society	2019
Putnam Competition (ranked 627/4,229 among undergrads specializing in mathematics)	2019

SKILLS AND INTERESTS

Technical	Python (NumPy, pandas, scikit-learn, TensorFlow, Keras, PyTorch), R, SQL, React, HTML/CSS
Language	Working proficiency in Chinese (Mandarin)
Interests	Rowing, Photography, Writing (Medium blog), Rubik's Cube Solving (WCA profile)