

Blair Cha

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EDUCATION

Macalester College – St. Paul, MN *Bachelor of Arts, Expected May 2020*
Major: Applied Mathematics and Statistics | *Minor:* Economics *GPA : 3.55 / 4.0*
Honors and Awards: Kofi Annan Scholarship Recipient (A 4-year scholarship for academic excellence)
Coursework: Correlated Data, Mathematical Statistics, Machine Learning, Data Science, Econometrics, Accounting
Technology: R, SQL, Python, MS Excel, MS Word, MS PowerPoint, MATLAB, Mathematica | *Society of Actuaries:* Exam P, FM

PROFESSIONAL EXPERIENCE

Actuarial Intern, Aon – Bloomington, MN June – Aug. 2019

- Performed annual valuations via ProVal, a software that performs asset-liability modeling to evaluate clients' pension plans.
- Generated long-term projections of pension information by identifying the best metrics for financial performance.
- Received letters of gratitude from partners of the firm for excellent work ethics and communication skills.

Mayo Innovation Scholar, Mayo Clinic – Rochester, MN Oct. 2018 – Feb. 2019

- Collaborated in a team of economics and biology students to assess the potential of a drug invention that treats hypertension.
- Generated a 70-page report on the team's research and recommendations on launching the drug to market.

Associate Analyst, Monicat Data Management Consulting Startup – Minneapolis, MN May – Aug. 2018
(Selected out of 40+ applicants for Macalester's MacNest Entrepreneurship Program, received a \$5,000 award)

- Led market research, hosted a technology summit in the Twin Cities, built partnerships with Midwestern firms.
- Manipulated MS Excel, R, and Tableau to analyze market research and presented report to the CEO.

Statistical Data Analyst Intern, Korea Association of Health Promotion – Seoul, South Korea June – July 2017

- Analyzed data pertaining to patients with Impaired Glucose Tolerance Syndrome and presented it to 30+ staff.
- Proposed an innovative idea to partner with local grade schools which led to new contracts with schools.

ACADEMIC PROJECTS

Investigating the Causes of Suicide Across Nations: A Mixed-Effect Model Approach, *Correlated Data* Dec. 2019

- Analyzed cross-country longitudinal data to explore the causes of suicide by identifying the best statistical model with R.
- Present research to all students and Mathematics, Statistics, and Computer Science Professors in April 2020.

Societal Factors that Best Explain Political Ideology Preference in South Korean Elections, *Machine Learning* May 2019

- Identified the most significant factors to be the interest in the election and the candidates' opinions of giving aid to North Korea with techniques such as Forward Subset Selection, Logistic Regression, Decision Tree, and Random Forest.

Black Scholes Model: Pricing Financial Options, *Differential Equations* Dec. 2018

- Transformed the Black Scholes equation into a heat equation in physics with methods in differential equations, and performed Monte Carlo simulations of stock price random walks in MATLAB.

Causal Inference, *Mathematical Statistics* May 2019

- Generated a 10-page textbook on Causal Inference and taught the materials to the class in a 45-minute presentation.

LEADERSHIP & COMMUNITY SERVICE

Macalester College Student Government
President (elected) Sept. 2019 – May 2020

- Oversee all student services: combatting food insecurity and economic inequality, advocating inclusive classrooms, etc.
- Lead meetings with student representatives and present progress to the President and Vice President of Student Affairs.

Vice President (elected) Sept. 2018 – May 2019
Sophomore Representative (elected) Sept. 2017 – May 2018

Teaching Assistant, Macalester College Mathematics Department

- Epidemiology* – Hold office hours and tutor students, grade, and hold meetings with the Professor. Sept. – Dec. 2018
- Probability* – On top of regular duties, hold tutoring sessions for students studying Exam P/Probability. Jan. – Dec. 2019

Resident Assistant, Macalester College – St. Paul, MN Sept. 2017 – May 2018

- Empowered 40 female first-years to overcome challenges and resolved conflicts between diverse individuals.