

# William He

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2332 Campus Dr., Evanston, IL 60201

## EDUCATION

### Northwestern University

*Bachelor of Science in Applied Mathematics and Statistics*

**Evanston, IL**

*Expected June 2023*

- **Cumulative GPA: 4.00/4.00**
- **Relevant Coursework:** Multivariable Calculus, Linear Algebra, Probability and Statistics

### King High School

**Tampa, FL**

- **Cumulative GPA: 4.00/4.00** (Salutatorian); **SAT:** 1580/1600; **ACT:** 36/36 *Graduated May 2019*

## RELEVANT EXPERIENCE

### Investment Management Group

*Analyst & Portfolio Committee Member*

**Evanston, IL**

*October 2019 – Present*

- Underwent training in accounting and valuation, including reading balance sheets, income statements, and cash flow statements, as well as performing comparable company and discounted cash flow analyses
- Collaborated with a team of new members to synthesize a long position on Costco;
  - Contributed to company overview, growth drivers, and potential risks
  - Articulated the importance of expedient domestic and international expansion for growth in membership revenue and long-term cash flow generation
  - Highlighted the stability of a primarily membership-based revenue stream against the ongoing trade war with China and increasing competition from internet retailers
- Evaluated and deliberated long positions on Dollar General, PayPal, and Boeing, including writing a Hold committee recommendation and final investment decision on PayPal

### Mathematical Modeling to Forecast U.S. Elections

*Undergraduate Research Assistant*

**Evanston, IL**

*April 2020 – Present*

- Simulated elections, including for the 2020 presidential race, using an adapted compartmental model
- Formatted polling data, fit parameters to the polling data in R, and ran simulations in MATLAB
- Backtested our model on past elections to analyze the accuracy and confidence of our forecasts
- Improved the model by adjusting the strength of our noise and categorically filtering polls

## LEADERSHIP EXPERIENCE

### Mu Alpha Theta, Math Honors Society

*Vice President*

**Tampa, FL**

*September 2018 – May 2019*

- Organized weekly math practices by determining what topics to cover and practice tests to use, leading the school math team to achieve an overall 5th place at the Florida State competition
- Taught lessons to the freshman team, working with members to ensure complete understanding of topics such as asymptotes, matrix determinants, and Cramer's rule
- Coordinated logistics for attending monthly competitions, in addition to preparations for a competition hosted by the school, ensuring it ran smoothly with over \$100 in concessions sales

## ADDITIONAL

**Skills:** Java (Intermediate), Python (Beginner), MATLAB (Intermediate), CapitalIQ, Financial Valuation

**Awards:** Murphy Scholar, Audience Choice Award for poster at Undergraduate Research & Arts Expo

**Languages:** English (Native); Chinese (Conversational); Spanish (Beginner)

**Activities:** TAMID at Northwestern, Metropolitan Ministries, Florida Student Association of Mathematics

**Interests:** Flute, Wikipedia Editing, Stationery, Photography, Audio Equipment