

# Phillip Han

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## EDUCATION

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### Vanderbilt University

Nashville, TN

*Bachelor of Arts in Mathematics*

*Expected Graduation: May 2025*

*Bachelor of Science in Computer Science*

- Relevant Coursework: Linear Algebra; Data Structures in C++; Multivariable Calculus; Number Theory; Differential Equations; Statistics
- Clubs and Societies: Cybersecurity Club(Secretary); Putnam Team; Math Club; Poker Club; VandyHacks

## EXPERIENCE

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### Undergraduate Research Assistant

Dec 2022 – Present

*Vanderbilt University Biostatistics*

*Nashville, TN*

- Developing a proprietary package to estimate and correct effect sizes for neuro-imaging studies
- Applying bootstrapping techniques to voxel data to remove bias from studies
- Explore scraping mechanisms to collect statistics from published studies to build a database for testing our techniques

### Undergraduate Research Assistant

Oct 2022 – Present

*Vanderbilt University Medical Center*

*Nashville, TN*

- Developing methods to determine significant correlations between different subjects' progression in neurodegenerative diseases and speech
- Developed a proprietary statistical package to clean raw experimental data and produce meaningful statistical properties
- Utilising non-conventional sentence and paragraph based experimentation over traditional syllabic data to provide more contextual results

### Lecturer

Jan 2022

*New Zealand Math Olympiad Committee*

*Auckland, NZ*

- Lectured high school invitees at the Summer Training Camp on Number Theory and Functional Equations
- Curated problem sets and instructive solutions with professors
- Graded exam scripts under half-day deadlines and provided personal feedback to 20+ students

## LEADERSHIP / AWARDS

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### Math Competitions

June 2020 – Present

- New Zealand IMO Team (HM)
- Australian Math Olympiad (Silver Medal)
- British Math Olympiad Round Two (21)
- New Zealand Math Olympiad (Gold)

### President

Dec 2020 – Dec 2021

*New Zealand Math Olympiad Student Association*

- Lectured middle and high school students on various introductory topics ranging from combinatorics to inequalities
- Applied modern math education techniques including a focus on 'why' and conceptual learning to great success with a number of students qualifying for the national summer camp
- Explored ways to visualize GitHub collaboration in a classroom setting

## SKILLS

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**Languages:** Python, Java, C++, R, MATLAB

**Libraries:** pandas, NumPy, Matplotlib

**Tools:** Microsoft Office(Word, Excel, PowerPoint)