

# Andrew Luo

 (778) 320-6660  [github.com/turnip314](https://github.com/turnip314)  [linkedin.com/in/andrew314](https://linkedin.com/in/andrew314)  [j92luo@uwaterloo.ca](mailto:j92luo@uwaterloo.ca)

## Education

### MASTER OF MATHEMATICS | UNIVERSITY OF WATERLOO

- Major in Computer Science (Thesis Option)
- Conducting research in symbolic computational methods for analytic combinatorics

### BACHELOR OF MATHEMATICS | UNIVERSITY OF WATERLOO

- Class of 2023 with triple majors in Computer Science, Combinatorics and Optimization, and Pure Mathematics
- Participated in two undergraduate research assistant programs under the sponsorship of NSERC
- Courses include Object Oriented Programming, Operating Systems, Data Structures, Algorithm Design and Analysis, Machine Learning, Computational Math, Numerical Optimization, Linear Programming, and Pure Mathematics

## Work Experience

### NOOM

Full-Stack Software Developer

NEW YORK CITY, NY

Jan. 2022 – Apr. 2022

- Planned, designed, and implemented a Natural Language Processing microservice for redirecting customer service and coaching requests using the Apache OpenNLP library
- Improved question detection and triage by over 15% and increased long term user engagement by 5%

### BDO

Full-Stack Microsoft Developer

MISSISSAUGA, ON

Sept. 2020 – Dec. 2020

- Developed backend logic in C# using .NET and Microsoft SQL Server and built the web application using Angular
- Added and contributed to the maintenance of the internal resource management tool

### WAYFAIR

Backend Developer

BOSTON, MA

Jan. 2020 – Mar. 2020

- Implemented the business logic for the customer service team using PHP and Microsoft SQL Server
- Created extensive unit and integration tests covering all cases of the business logic

### WISH

Full-Stack Software Developer

SAN FRANCISCO, CA

May 2019 – Aug. 2019

- Used SQL and MongoDB queries to monitor merchant fraud lifecycle including fines, warnings, and refunds
- Contributed to refund fraud investigations which helped save the company \$40,000 in refund costs per week


## Projects

### SAGE ACSV

 [github.com/ACSVMath/sage\\_acsv](https://github.com/ACSVMath/sage_acsv)

- Helped develop a computer algebra package for computing asymptotic behaviours of multivariate rational generating functions
- Available as an open-source PyPi package in SageMath

### PERSONAL WEBSITE

 [github.com/turnip314/turnip314.github.io](https://github.com/turnip314/turnip314.github.io)

- Designed a personal website using Angular with Typescript
- Hosted on [www.turnip314.com](http://www.turnip314.com)

## Skills

- **Languages:** Python, C++, C, Java, PHP, C#, SQL, JavaScript, Scala, HTML, CSS, Kotlin
- **Tools & Technologies:** MongoDB, Microsoft SQL Server, Angular, Git, Visual Studio, JetBrains

## Achievements

### PUTNAM MATH CONTEST

- Ranked top 10 percentile of all contestants in North America

### NSERC SCHOLARSHIP

- Two time recipient of the NSERC undergraduate research award valued at \$6000

### CANADIAN MATHEMATICAL OLYMPIAD

- Qualified twice after ranking top 50 in the Canadian Open Math Challenge