Andrew Luo

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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   **NEW YORK CITY, NY**
Full-Stack Software Developer   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   **MISSISSAUGA, ON**
Full-Stack Microsoft Developer   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   **BOSTON, MA**
Backend Developer   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   **SAN FRANCISCO, CA**
Full-Stack Software Developer   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   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
- Designed a personal website using Angular with Typescript
- Hosted on 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