

Junya (Lily) Zhang

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Work Experience

Google Ads Infra | Software Engineering Intern | Mountain View, CA Sept 2020 – Present

- Boosted resource usage from 40% to 90+% by converting the existing count-based request batching algorithm into a resource-usage-based algorithm for an internal massive data matching service.
- Designed and modified a component of a single-tenant service to support multiple tenants.
- Proposed sounding plans for refactoring a set of test files, each with 2,000+ lines of code, to improve test coverage and readability.
- Fixed error-prone bugs that lead to job crashes following the C++ standards.

University of Toronto | Head Teaching Assistant | Toronto, Canada Sept 2019 – Apr 2020

- Led a group of 30 TAs for Calculus courses (MAT135/136) with approximately 2,400 students.
- Organized weekly TA meetings, facilitated TA training workshops, and helped TAs prepare for classes.
- Identified communication efficiency issue within the teaching team and resolved it by introducing appropriate tools.
- Independently planned online final exam including step by step instructions for students, TAs, and instructors.

Google Ads | Software Engineering Intern | Kirkland, WA May 2019 – Aug 2019

- Designed, implemented, tested and launched feature in production for processing location changes in bulk upload.
- Implemented language localization for the feature, including keyword translation and number parsing.
- Implemented low latency lookup engine using cache, thread pool, and parallel computing.
- Worked closely with product manager on user experience design and feature requirements.
- Practiced on cross-team communication and filed bugs against multiple teams for fixing cross-team inconsistencies.
- Proactively refactored 2,000+ lines of code which improved code readability and test coverage.

Google Firebase | Engineering Practicum Intern | Waterloo, Canada May 2018 – Aug 2018

- Converted existing synchronous resource provisioning pipeline into async pipeline and launched in production.
- Implemented application and storage layers using Java, Spanner, protocol buffers, AppsFramework, Guice and FluentFutures.
- Enforced 100% test coverage using Junit and Mockito.
- Extended original project to be generically usable by other provisioning workflows and wrote design doc for it.
- Led a team of six interns in hosting Google Waterloo TGIT Talent Show with over 200 attendees.

University of Toronto | Teaching Assistant | Toronto, Canada Sept 2017 – Apr 2019

- Led classes for a Calculus course (MAT137) with 70 students.
- Graded assignments and exams for over 1,000 students.

Skills

- **Languages:** Python, Java, C, C++, SQL, R, HTML, JavaScript
- **Tools:** Git, protocol buffer, JUnit, Guice, producer graph, Borg, Spanner, LaTeX, MATLAB
- **Courses Taken:** Algorithm, Data Structure, Database, Numerical Analysis, Computer Graphics, Geometry Processing, Computer Vision, Artificial Intelligence, Operating System

Education

University of Toronto St. George Campus Expected Graduation: **June 2021**
B.S. Computer Science Specialist, Mathematics Major GPA: **4.0** [98.15/100]

Awards

Tom Hull Scholarship in Computer Science 2019
Awarded to one undergraduate or graduate student in the Department of Computer Science in memory of Professor Tom Hull.

Daniel B. DeLury Teaching Assistant Award 2019
*Awarded to 3 teaching assistants each year for excellent TA work. **First ever** undergraduate recipient of this award.*

Governor General's Academic Medal Recipient 2016
Awarded to the student graduating with the highest grade average from high school. The most prestigious award for Canadian high school students.

Please visit <https://lilyzhang.info> for the full list of awards.