

# Joanna Lu

SOFTWARE DEVELOPER

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## Qualifications

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**Languages** C++, C, Python, SQL, Java, Javascript, HTML, CSS

**Data** MySQL, MongoDB, Amazon Redshift, Apache Hive

**Analytics** R, Matlab, Hadoop, MapReduce, matplotlib

## Experience

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### SAP SE

Waterloo, ON

PRODUCT MANAGEMENT INTERN

MAY 2017 - PRESENT

- Responsible for managing Dynamic Tiering, an extended storage component in SAP HANA's in-memory database.
- Lead communication between development features and consumer feedback to implement deployment strategies/timelines
- Conducted competitive win-loss analysis with Excel and analyzed competitive conditions of market sector
- Created interactive data visualization demos using D3 and Jupyter and tutorials to outline system features

### Capital One

Waterloo, ON

DATA SCIENTIST INTERN

MAY 2016 - AUG. 2016

- Queried and constructed SQL tables to clean and restructure raw consumer chat information. Performed data analysis reports on chat-agent data and customer satisfaction rates mined from chat surveys
- Built aggregated data pipelines between Redshift and MongoDB for front-end data visualization tools and charts
- Improved text categorization model by 8% for agent-customer chat conversations through data test training and querying

## Education

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### University of Waterloo

Waterloo, ON

BACHELOR OF MATHEMATICS, DOUBLE MAJOR IN COMPUTER SCIENCE AND STATISTICS

SEPT. 2015 - PRESENT

- Awarded the President's Scholarship with Distinction for entrance average above 95%.
- Selected Coursework: Data Structures and Algorithms, Linear Algebra, Statistics II and Probability, Numerical Computation

## Honors & Awards

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2017 **Grace Hopper 2017 Conference Grant**, Selected for leadership involvements & academic excellence

UWaterloo

2015 **American Mathematics Contest, Top 5%**, Qualifier for AIME Invitational round

M.A.A.

2015 **Euclid Mathematics Contest**, School Champion, Top 10% With Distinction

UWaterloo

## Leadership

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### Waterloo Data Science Club

Waterloo, ON

DIRECTOR OF EXTERNAL RELATIONS

AUG. 2016 - PRESENT

- Responsible for securing outside sponsorships for the Data Science club and maintaining contact with existing relations
- Organizing speaker events and workshops, such as Capital One and Uber, to general members

### Acabellas

Waterloo, ON

SOPRANO

SEPT. 2015 - APR. 2016

- Singer in an all-female A Capella choir and arranged 4-piece harmony pieces for the choir to perform at local venues.
- Qualified for the International Championship of Collegiate A Capella Choir (As seen in Pitch Perfect!).

## Projects

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### Happy Exam Thoughts

Waterloo, ON

FACEBOOK MESSENGER DATA MINING AND SENTIMENT ANALYSIS

AUG. 2016 - SEPT. 2016

- Mined (my personal) Facebook Messenger data into HTML form; extracted and separated conversations into parseable data
- Used IBM's AlchemyLanguage API to categorize message sentiments and matplotlib to analyze sentiments during exam time

### ESC-it (C++ Game)

Waterloo, ON

UNIVERSITY OF WATERLOO

SEPT, R 2016 - DEC. 2017

- Implemented a C++ game using a Model View Controller with various classes to support and monitor display, dungeons, enemies, players and etc. with customizable features (Level-Ups, Potions, Power-Ups, Create-Your Own Player and etc.)
- Structured game using design patterns such as Decorator Pattern (Potion and Gold Inventory), Observer Pattern (Enemy AI and battles) and Factory Pattern (Character Generation)