JANE SHI

2B Computer Science and Pure Math at University of Waterloo

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WORK EXPERIENCE

Big Data Researcher and Developer
SAP Labs

📅 May 2019– Present   📍 Waterloo, ON

- Researching and implementing database optimization methods for SAP HANA-a in-memory database software

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Software Developer
Grapevine6

📅 May 2018 – Aug 2018   📍 Toronto, ON

- Wrote **Java** application (using **Solr-Client**) that analyzes and records errors in the log file, then reports the information via email, which improved efficiency for testing
- Implemented the backend for a new SMS feature using **Ionic Framework, React JS, Twilio** and **MongoDB**, which allows customers to receive news digest and share social media content via SMS
- Integrated **Swagger** and **Mocha** testing (with **Node.js**) into the codebase, by adding automated tests and API documentation, which improved the code-base readability, and shortened time for testing

PROGRAMMING PROJECTS

Multi-player Tetris with C++

- Implemented interactive game features, such as block rotation, pattern matching, and special effects.
- Utilized various design techniques, such as using factory pattern and observer pattern for player's interactions, and command pattern and prefix trees for processing user input.
- Implemented command-line interface and graphical interface with **C++ graphics** library and **MVC** design pattern.

Stanford Machine Learning Course and deep learning course

- Achieved **96%**, implemented supervised learning and unsupervised learning algorithms using **MATLAB**
- Implemented linear regression, gradient descent, neural network, and k-means algorithm

MATH EXPERIENCE

- **Top 6** in Canada, Canadian National Math League, 2016
- **Top 20** out of 18284 participants, Euclid Competition, 2015
- **First place** out of 747 participants, Alberta Math Competition, 2015
- **National** Math Olympiad qualifier, 2015, 2016, 2017
- Attended six invitational and selective math summer events, including Canada/USA Mathcamp and Canadian Math Society Camp
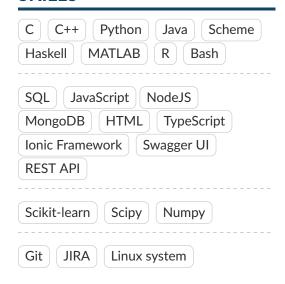
LEADERSHIP

- **Volunteer**, Women in Computer Science, University of Waterloo
- Greenhouse **Social Entrepreneurship** program, University of Waterloo
- Youth Advisory Council, Immigrant Services, **120+ hours** of volunteering, 2015-2017
- President for High School Math Club, 2015-2017

VISION

*"Inspired by the theory of computer science and mathematics;
Focused on learning about algorithms that transform data into solutions"*

SKILLS

C   C++   Python   Java   Scheme   Haskell   MATLAB   R   Bash

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SQL   JavaScript   NodeJS   MongoDB   HTML   TypeScript   Ionic Framework   Swagger UI   REST API

Scikit-learn   Scipy   Numpy

Git   JIRA   Linux system

EDUCATION

Computer Science and Pure Mathematics
University of Waterloo

📅 Sept 2017 - Apr 2022

- **René Descartes National Scholarship** 1 of 4 recipients ($18,000)
- President's Entrance Scholarship
- **Dean's Honours** list, Fall 2017
- Advanced CS Courses: Object Oriented Design, Functional Programming, Data Structures
- Advanced Math Courses: Linear Algebra, Analysis, Combinatorics

SOFT SKILLS

- Driven and diligent self-learner
- Effective and technical communicator in teams
- Challenge-seeking
- Consistent work habits, as shown in high academic standing

INTERESTS

- Skydiving
- Fitness Oriented
- Food and travel blogger at www.janeshi.com
- Fluent in Mandarin Chinese