CHRISTINA LIU

Computer Science & Financial Management Class of 2020 - University of Waterloo
Friar Luca Pacioli Fellow, GPA 3.70
(Awarded to the top student in the Faculty of Mathematics for academic excellence and community leadership)

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TECHNICAL SKILLS

- **Languages:** C++, Python, SQL, HTML, CSS, Javascript, R, Scheme/Racket
- **Tools & Frameworks:** Tableau, Node.js, Unix/Bash, AWS, MongoDB, GraphQL, Apache Spark, Git

WORK EXPERIENCE

Ecobee   **Toronto, Ontario**
Software Engineering Intern   Sept 2018 – Dec 2018
- Designed and shipped a new dashboard that visualizes real time thermostat connection and demand response data for Energy Service clients, resulting in 7x performance boost
- Developed ETLs using Python and SQL to automate the sales reporting process, increasing efficiency by 70%
- Used Elasticsearch to extract and create important metrics used to analyze product health and present design decisions

University of Waterloo Faculty of Mathematics   **Waterloo, Ontario**
Undergraduate Research Assistant   May 2018 – Aug 2018
- Enhanced forecasting of securities' movements through application of AR and MA time series models in R

KPMG LLP   **Toronto, Ontario**
Valuations Consultant Intern   Jan 2018 – Apr 2018; Jan 2017 – Apr 2017
- Led new research project on the potential applications of Blockchain technologies in derivative trading to executive review; coordinated efforts across multiple deal teams
- Identified bottlenecks in the data analysis process, reported anomalies and improved pipeline efficiency by 40%
- Developed the pitch deck that won a new $71M fairness opinion deal on Canadian World Fund (TSX: CWF)

Sun Life Financial   **Waterloo, Ontario**
Business Systems Analyst   May 2016 – Aug 2016
- Leveraged Excel macros to design automated month-end report templates, reducing reporting times by 50%
- Designed and conducted integration tests to identify critical bugs on new work request platform "Service Now"
- Proposed and led the launch of Sun Life's agile workspace initiative, now fully implemented at the Toronto HQ

PROJECTS

Bot-Or-Not (MHacks XI) • *HTML, JS, CSS, Node.js, Express.js*   Oct 2018
- Built a Turing Test inspired game where players placed in a chat room must determine whom amongst them is actually a bot
- Architected game's backend flow using Express.js and Socket.io to support concurrency

Rogue • *C++*   Jul 2018
- Created a text-based remake of Rogue, a dungeon-crawler video game, as a three-person team
- Optimized combat design by applying visitor pattern on player and enemy classes, enabling seamless addition of new features and reducing code redundancy by 4x

Citadel Securities Datathon – Technical Paper • *Python (numpy, pandas, matplotlib), R*   Feb 2018
- Analyzed 60M+ records of Geotab data to investigate the correlation of high traffic locations to accident rates
- Co-authored a technical paper on the methodology, data manipulation, and key findings of the above analysis

ACTIVITIES

Volunteerism	University of Waterloo Math Faculty Ambassador, Finance Teaching Assistant, Women's College Hospital Volunteer, Relay for Life Executive (raised $4000+ for the Canadian Cancer Society)
Interests	Toronto City Orchestra First Violinist, Warriors Ping Pong Club, Dance Life X Ballet