

# Celeste Luo

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## Skills

**Languages** JavaScript, Python, TypeScript, Java, C/C++, PHP, Golang, Ruby  
**Tools & Technologies** Node.js, React.js, Django, AWS, AngularJS, Docker, PostgreSQL, Linux

## Education

### University of Waterloo

Waterloo, ON

BACHELOR OF COMPUTER SCIENCE • HUMAN-COMPUTER INTERACTION SPECIALIZATION

Sep 2022 - Apr 2027

- **Activities:** Women in Computer Science, Cybersecurity & Privacy Institute Student, Capture the Flag
- **Courses:** Data Structures & Algorithms, Object-Oriented Software Development, Operating Systems, C/C++; 3.9 GPA

## Experience

### Software Developer, DevOps / Build & Tools team

Waterloo, ON

PLAYSTATION (SONY INTERACTIVE ENTERTAINMENT)

May 2024 - Aug 2024

- Optimized startup time from **minutes to seconds** for hundreds of CI/CD pipelines by fetching config files via the GitHub API
- **Automated firewall** configuration & deployment as a single workflow, **shortening by 6+ days** new app onboarding lead time
- Designed a config-as-code structure, Jenkins pipelines and Node.js scripts to store & update firewall security policies, integrating Akamai REST APIs into a TypeScript client library with JSON schema typing and endpoint unit testing
- Built an on-demand **allowlist testing** solution with **AWS Lambda** functions and Jest, including custom certificate support

### Undergraduate Research Assistant

Waterloo, ON

DAVID R. CHERITON SCHOOL OF COMPUTER SCIENCE • UNIVERSITY OF WATERLOO

Sep 2023 - Dec 2023

- Implemented Python SciKit random forest & other deep learning models for **network bandwidth prediction** research
- Evaluated existing systems on cellular downlink prediction to test & train models under different tree parameters

### Security Software Developer

(Remote) Waterloo, ON

ISARA CORPORATION

May 2023 - Aug 2023

- Improved data export generation **efficiency by 85%** by implementing an Express.js module REST API endpoint
- Substantially increased data search and handling speed & capacity to **over 2 million records (+300%)** by migrating a fundamental library of the technology stack to Elasticsearch within a tight deadline
- Built a **modular Jest unit testing** system utilizing JavaScript ES6 & TypeScript for maintainable and rapid test creation
- Integrated Elasticsearch into a React/TypeScript search client, with custom data querying syntax and fields using GraphQL
- Set up **automated Docker packaging** and PostgreSQL database provisioning scripts with SSL certificate configuration

### Site Developer

Toronto, Ontario

COMPUTER PROGRAMMING CLUB • W.L. MACKENZIE C.I.

Sep 2021 - Jun 2022

- Contributed to [ctf.mcpt.ca](https://ctf.mcpt.ca), an open-source online judge for cybersecurity challenges, hosting school-wide and provincial contests with over 100 problems, 375 users & 5000 submissions
- Developed an asynchronous client-facing module in JavaScript to **self-administer Docker** resources on-demand via REST API

## Honors & Awards

### Women in Cyber Scholarship

FS-ISAC

Recipient; USD\$10 000, with year-long mentorship from Morgan Stanley Canada's CISO

2024

### European Cyber Security Challenge

European Union Agency for Cybersecurity

1st Place (Team Canada) in international bracket, 10th of 34 countries, *focus: digital forensics*

2023

### picoCTF Cybersecurity Competition

Carnegie Mellon University

1st Place in Canada, 3rd worldwide of 7794 teams / 18000+ students, *focus: digital forensics, Linux*

2022

### CyberPatriot Cybersecurity Competition

US Air Force Association

1st Place in Canada, 5th worldwide of 5254 teams / 19000+ students, *focus: Windows OS security & networking*

2021, 2022

## Projects

**words-api** Express.js API for random words by parts of speech; open source, 30+ stars on GitHub

**Dark Docs** Open source Google CSS Dark theme contributor; 46 000+ installs, 1000+ installs / week

