





# ALINA CAI

 alina.cai@uwaterloo.ca    alina-cai.me    linkedin.com/in/alina-cai    github.com/alina-cai

## Education

### University of Waterloo

Honours Bachelor of Computer Science

Waterloo, ON

Sep 2022 - Present

**Coursework:** Algorithm Design and Data Abstraction, Functional Program Designing

**Clubs:** Women in Computer Science, Computer Science Club, Data Science Club, Intramural Basketball

## Skills

**Languages:** Python, C, C++, SQL, HTML, CSS, SCSS, Java, JavaScript, TypeScript, Ruby, ~~TeX~~, Racket

**Frameworks/Libraries:** Pandas, NumPy, Matplotlib, Flask, React, Node.js, Scikit-Learn, TensorFlow, Keras, PyTorch, Kedro

**Tools:** Git, Linux, Conda, AWS, GCP, Azure, Jupyter Notebook, Seaborn, MLFlow, Docker, Prophet, Kubeflow, Apache NiFi, Grafana

## Experience

### Software Engineer | BluWave-ai

May 2023 - Present

- Collecting, preprocessing, and cleaning data from the California Independent System Operator API for further model training
- Developing load forecast predictors for global regions, leveraging **Kedro** to structure modular data engineering pipelines
- Orchestrating the deployment and scaling of future energy consumption pipelines using **Kubeflow** on **Kubernetes** clusters to optimize resource utilization and enable seamless scalability across almost 10 locations, including NYC, California, and Texas
- Containerizing the predictors with **Docker**, facilitating consistent integration onto a **Google Cloud Platform** virtual machine

### President | Lisgar Collegiate Institute Computing Club

Sep 2018 - Jun 2022

- Organized and facilitated weekly technical and networking workshops, fostering programming interest to over 30 students
- Mentored **Python** foundations utilizing online resources, devising practice exercises to enhance concept comprehension

## Projects

### Lingdle 🎲 | Python, TypeScript, Node.js, React

Present

- Creating a unique classical music wordle-type game web application employing **Node.js**, **React** with **Vite**, and **Fastify**
- Implementing an efficient caching system to store and retrieve snipped mp3 files, engaging a relational database with **SQL**
- Integrating **TypeScript** and **pnpm** for full-stack dependency management to ensure program scalability for a bigger repertoire

### Titanic Survival Predictor 🎲 | Python, Pandas, Matplotlib, Scikit-Learn

June 2023

- Performed feature engineering and data analysis to build a **ML** model predicting Titanic survival with an accuracy of **81.46%**
- Executed the optimization of a RandomForest Classifier from **scikit-learn**, applying train-validation split to mitigate overfitting

### League of Legends Champion Randomizer 🎲 | Python, HTML, Flask, CSS, BeautifulSoup

Jan 2023

- Spearheaded a web application using **Python**, **Flask**, and **CSS**, enabling the dynamic display of randomized champion profiles
- Applied web scraping techniques using **BeautifulSoup4**, designing an agile **HTML** template for the extracted information
- Utilized **requests** library to fetch and convert image URLs into base64-encoded URIs, facilitating seamless image rendering

### Personal Website 🎲 | JavaScript, HTML, CSS

Dec 2022

- Designed and developed an interactive personal portfolio website showcasing various projects using **HTML** and **JavaScript**
- Built an aesthetic theme using **CSS**, applying interactive animations and delivering an optimal multi-platform user experience

## Awards

**Euclid Mathematics Contest** | 99.6% percentile out of 22,372 contestants

Apr 2022

**Canadian Computing Contest** | 83.5% percentile out of 3,262 contestants

Feb 2022

## Leadership

### Music Teacher | Alina's Music Studio

Mar 2019 - Jun 2022

- Established a start-up studio delivering thorough instruction of piano, violin, and rudimentary theory to over 35 students
- Provided individualized feedback, promoting confidence and musical growth within a supportive learning environment

### Concertmaster | Lisgar Collegiate Institute Symphony Orchestra

Sep 2018 - Jun 2022

- Led an ensemble of over 50 musicians, providing practical expertise on technical intricacies and expressive interpretation
- Collaborated with the conductor and section leaders to cultivate a unified artistic vision and assure cohesive performances