ALINA CAI

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Education

University of Waterloo   Waterloo, ON
Honours Bachelor of Computer Science   *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, SCSS, CSS, JavaScript, TypeScript, Ruby, LaTeX, Racket
Frameworks/Libraries: Kedro, Kubernetes, Jupyter, Pandas, NumPy, Matplotlib, Flask, Node.js, React, Pygame, Requests
Tools: Git, Linux, Conda, MLFlow, Docker, Prophet, Kubeflow, Apache NiFi, Azure, Google Cloud Platform, AWS, Grafana, Jira

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
- Conducted spot checking of smart grid models for Mumbai taxi, validating forecast accuracy to optimize charging operations

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
- Initiated the successful implementation of an **Arduino** project, encouraging student creativity to solve real-world issues
- Created an extensive STEM opportunity database, equipped with valuable resources for many scholarships and competitions

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

Projects

Lingdle 🔗 | *Python, TypeScript, Node.js, React*   May 2023
- 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

League of Legends Champion Randomizer 🔗 | *Python, HTML, Flask, BeautifulSoup*   Jan 2023
- Spearheaded a **Python** program with **Flask**, enabling dynamic display of randomized League of Legends champion profiles
- Applied web scraping techniques using **BeautifulSoup4**, designing an efficient **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, SCSS, Ruby*   Dec 2022
- Developed and configured a personal portfolio website highlighting projects, notes, and interests using **HTML** and **JavaScript**
- Built an aesthetic theme using **SCSS** and **Ruby**, incorporating design elements and customization options for an enhanced UI

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