

Victor Gao

Email: victorgao001@gmail.com | Github: <https://github.com/victorgao001> | Website: <https://victorgao001.github.io/>

Education

University of Waterloo (Statistics Major)

2021 - Present | 3.9/4.0 Faculty GPA

Skills

Languages: C++, C, C#, Java, Rust, Python, Ruby, JavaScript, Typescript, PHP, HTML, CSS, SQL, R

Frameworks: Matplotlib, Pandas, Numpy, Tensorflow, PyTorch, Flask, Node, jQuery, Vue, Angular, React, Svelte, Tailwind, Jekyll, MYSQL, SQLAlchemy, MongoDB

Tools: Git, Linux, Docker, Nginx

Portfolio (See [website](#) for additional projects)

Herriot ([Demo](#), [Code](#)) | A organiser/checklist for programming problems

- Allows users and/or administrators to create, edit, vote, and comment on problems
- Allows creation and sharing of custom problem lists
- Supports filtering/sorting problems by difficulty and tags

Skills used: Typescript, Vue, Nuxt, Tailwind CSS, Node, Express, MongoDB, Git

Tle ([Code](#)) | Discord Bot for Competitive Programming

- Uses data from Codeforces API to graph user statistics, suggest practice problems, and predict rating changes and problem difficulties
- Authenticates and links Discord users to their Codeforces account

Skills used: Python (SQLite, Numpy, Pandas, Matplotlib), Git

Music Classifier ([Blog](#), [Code](#)) | Music Classification AI

- Collects and processes songs from the internet and prepares the training data using Fourier analysis
- Trains a convolutional neural network (CNN) to classify music by genre with 99% accuracy
- Prevents overfitting using dropout and data augmentation

Skills used: PyTorch, Numpy, Pandas, Matplotlib

Experience (See [website](#) for additional experience)

Redlib | Software Developer, System Administrator

- Implemented an configuration option to filter subreddits
- Hosted a local webserver using Docker and Nginx
- Exposed the server to allow access over the internet

Skills used: Rust (Hyper, Askama, Rustls), Docker, Nginx, Linux (Bash)

Codeforces LATOKEN Round 1 | Contest Organiser, Problem Author

- Created a programming competition with 21,000+ participants sponsored by LATOKEN
- Devised and prepared original algorithmic problems
- Ensured accurate judging verdicts and a balanced difficulty distribution

Skills used: C++

Awards

- **Codeforces** (Popular programming website) | **International Master** (top 0.3%)
- **Facebook Hacker Cup Round 3 2023** (International coding contest) | **185th place**
- **USA Computing Olympiad Platinum Division 2023** (National contest for USA) | **1st place**
- **Google Kickstart Round H 2021** (International coding contest) | **47th place**
- **Canadian Computing Olympiad 2020** (Invitational contest for top Canadians) | **Silver medal**