

# Simon JinLin Cen

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## EDUCATION

### University of Toronto

Bachelor of Applied Science in Computer Engineering

Toronto, Canada

Expected Graduation: April 2024

## PROFESSIONAL PROFILE

- Experienced in web and game development from ground up – design, development, unit testing, delivery, and maintenance.
- Skilled front-end developer with the use of MERN stack, Material UI, React-Bootstrap framework.

## TECHNICAL SKILLS

- **Computer Language Skills:** JavaScript, Java, C++, C, Python, HTML, CSS, XML, EJS, MATLAB, Verilog
- **Frameworks/Libraries:** Express.js, React.js, Redux, WebRTC, Socket.io, React-Bootstrap, React Spring, Material UI, Mongoose, Validator.js, Chart.js, Peer.js, React Router, Bootstrap, node.bcrypt.js, jwt-decode, morgan,
- **Database/SW Tools:** MongoDB, Node.js, Postman, Heroku, Google Analytics, Git, Namecheap, Passport.js, body-parser, CORS, Rebrandly, Datamuse API, Axios, SendGrid API, nodemon

## ENGINEERING PROJECTS

### easyMap Software Engineer

Jan. 2021 – April 2021

[www.github.com/simoncen/easyMap046](https://www.github.com/simoncen/easyMap046)

Geographical Information System Mapping app similar to Google Map that helps users explore more than 18 regions in the world.

- Designed the user interface of the map using **C++ gtk library**.
- Maintained the backend system using **Valgrind**.
- Implemented **A\* algorithm** that sped up the pathfinding functionality by 50%.
- Utilized mathematical libraries to develop **simulated annealing algorithms** for the travelling salesman problem. The performance ranks top among fellow class competitors.

### To-do App Full-stack Developer

June 2020 – August 2020

[www.listnotes.me](https://www.listnotes.me) / [www.github.com/simoncen/todo-app](https://www.github.com/simoncen/todo-app)

Trello-like mini to-do list full stack web application that helps 160 active users manage their daily tasks as of this date.

- Developed the **React**-built frontend with components from **Material-UI** and manipulated states with **React-Redux**.
- Used **passport-jwt** to carry out the authorization and authentication process.
- Developed **Rest APIs** with **Express.js** and tested them with **Postman**.
- Engineered the database with **MongoDB** to manage user's to-do lists' data.
- Utilized **Mongoose** library for **Node.js** to access MongoDB.

### Smile Video Chat App Full-stack Developer

Jan. 2021 – Present

Zoom-like mini video chat web app that allows users to video chat with whoever they want.

- Developed the front-end using **EJS** templating language with embedded **JavaScript**.
- Utilized **Express.js** and **Socket.io** in the backend to develop communication between the servers.
- Created unique room numbers for up to 20 users to chat in a specific room at the same time using **uuid**.
- Used **PeerJS** to establish the connection between clients in order to implement **WebRTC**.

### Covid-19 Tracker App Front-end Developer

Dec. 2020 – Jan. 2021

[www.cvirustracker.tech](https://www.cvirustracker.tech) / [www.github.com/simoncen/Covid-19-Tracker](https://www.github.com/simoncen/Covid-19-Tracker)

Coronavirus tracking web application that collects data regarding infected, deaths, and recovered cases from over 300 countries and presents them to users through graphics and numbers.

- Built the frontend using **React** along with components from **Material-UI**.
- Designed graphics and animation with **Chart.js** and **react-count-up**.
- Fetched data from <https://covid19.mathdro.id/api> with **axios**.