

# Max Ning

## Software Engineering

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### Education

#### University of Waterloo

Candidate for Bachelor of Software Engineering (BSE)

Waterloo, ON

Sept 2020 – Apr 2025

### Skills

**Languages:** Python, JavaScript, Java, C, SQL, HTML, CSS

**Libraries & Frameworks:** React, Django, Express, Pygame, Babel, Webpack, jQuery

**Tools:** Node.js, PostgreSQL, MySQL, MongoDB, Trello, Git, Bash, GCC

**Concepts:** OOP, RESTful APIs, Agile Development, Serialization, Asynchronous Programming, Unit Tests

### Experience

#### Front End Developer Intern – ChunYu Counselling

Sept 2020 – Dec 2020

*React, Node.js, Material UI, Git, Unit Tests*

Toronto, ON

- Developed the front end for a psychiatry private practice website according to stakeholder specifications using **React** and **Node.js**
- Revamped legacy website with responsive **Material UI** components, increasing online therapy applications by **34%**
- Built a Mandarin translation tool to provide Chinese users easier access to website content, leading to an increase in Mandarin related therapy inquiries by **40%**
- Collaborated with team and contractor by participating in **Agile** methodology and version control in **Git**

### Projects

#### 🔗 JungleDiff | Python, Django, React, PostgreSQL

Sept 2020

- Created a web app that provides "League of Legends" players with game play performance insights
- Developed the front end using **React** and **Chart.js** to display user statistical graphs based on a logistic regression of the player's match history and previous in-game performances
- Implemented **RESTful API** format for calling data transfer methods to store player information via the Riot Games API in a **PostgreSQL** database
- Constructed an API call queue to avoid the Riot Games API rate limit

#### 🔗 Agenda Bot | Python, MySQL, Discord API, OOP

Nov 2020

- Developed a Discord bot during the 2020 Oxford Hacks Hackathon that is used by **150+** post-secondary students for scheduling academic and social events
- Utilized the Discord API to store important events and relevant information in a **MySQL** database
- Implemented **async functions** and **cogs** to allow simultaneous function calls without a queue for commands
- Added security measures to prevent data leaks by discerning if Discord user is in the same server that the bot is being called in

#### 🔗 Quarantine Cut | AWS, React, Express, Node.js, MongoDB, Mongoose

June 2020

- Built an exercise tracker to promote and record physical activity during the Covid-19 quarantine period
- Deployed a cloud **MongoDB** database cluster using **MongoDB Atlas** and **AWS** to store user identification details and exercise logs
- Implemented CRUD options via data transfer methods, using a **RESTful API** format, for users to manipulate and create exercise logs through a **Bootstrap** UI

#### 🔗 Email Server and Client | Java, Swing, OOP

Sept 2018

- Developed a functional email server and client used by **200+** high school students for cross-club communication
- Implemented algorithms such as **binary search** and **selection sort** for users to manipulate email data
- Designed a GUI that simulates an email client using Java's **Abstract Window Toolkit** and **Swing** APIs
- Constructed data structures such as **linked lists** and **trees** to link email records together for email data storage
- Built a networking system that transfers email data between multiple computers through a central server

### Interests

Guitar/Piano, Songwriting, Swimming, Manga/Anime, League of Legends, Psychotherapy, Hydroponics, Camping, Foodie