

# Jesse Bing Han

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## TECHNICAL SKILLS

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**Languages:** Python, Java, C, JavaScript, TypeScript, Scripting  
**Frameworks:** Node.js, React, Django, Express.js, Next.js, Vite.js, jQuery  
**Databases:** MongoDB, PostgreSQL, MySQL, SQLite  
**Web Development Libraries:** Tailwind, Prisma, Three.js, NextAuth/Auth0, GSAP  
**ML/AI Tools:** ChatGPT API, TensorFlow, Jupyter Notebooks

## EXPERIENCE

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### Teaching Assistant

September 2023 – Present

*University of Toronto*

- Responsible for holding tutorials and office hours to 40-50 students for Theory of Computation
- Create problem sets and solution manuals relating to course topics
- Weekly meetings with professor to discuss lab materials and teaching methods

## EDUCATION

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### University of Toronto

Sept. 2020 – Expected April 2024

*Honours Bachelor of Science | Computer Science Specialist*

- **Honour Roll:** Obtained a grade of 90% or greater in the majority of Mathematical and Computational Sciences courses taken at the University of Toronto for the annual year
- **Dean's List:** Achieved a cumulative grade point average greater than 3.50 at the end of the academic session
- **June Scott Award:** Awarded annually to the University of Toronto student with the highest mark (100%) in a statistics course

## PROJECTS

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### [jessebinghan.com](https://jessebinghan.com) (Personal Portfolio) | *Frontend Development*

2023

- Achieve 10x reduction in glTF model size with Blender and DRACO compression for seamless client-side loading
- Leverage advanced animation techniques such as smooth scroll and ScrollTrigger to deliver a beautiful UI
- Enhance animation fluidity by integrating techniques like linear interpolation and SmoothDamp
- Design entire application around Singleton principle to build an evolving interface for immersive user experience

### [kunjiajia.com](https://kunjiajia.com) | *DSA Teaching Platform*

2022

- Used by my professor to supplement course material for Data Structure and Algorithm classes with 100+ students
- Comprehensive curriculum which deep dives into foundational and advanced topics with intuitive code solutions
- Simple static webpage hosted on AWS Amplify to leverage built-in redundancy and auto-scaling capabilities

### Yell | *Full-stack Realtime Instant Messenger*

2022

- Secure user information using NextAuth.js to connect client's Google OAuth session with a MongoDB database
- Implement simple search component using GraphQL queries for high-performance data retrieval
- Create high-level database abstraction with Prisma to facilitate an ORM between Node.js and TypeScript
- Style React Components with Chakra UI for custom theming and React Hot Toast for lightweight notifications

### Three Musketeers Game | *Game Development | Collaborative School Project*

2021

- Deliver interactive GUI built on JavaFX to practice implementation of software design patterns and OOP concepts including Model-View-Controller (MVC), Inversion of Control, Inheritance, Composition, and Polymorphism
- Drive standups and adhere to Agile methodology as the Scrum master to ensure project is delivered successfully

### Fractal | *Frontend Development*

2021

- Responsive web design based on pure HTML, CSS, and JavaScript without the use of external frameworks
- Password management with MySQL Database which uses SHA256 Hashing to securely encrypt sensitive data