# Rae Yan

Open to relocation
Availability: Jan. – Aug. 2025
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## EDUCATION

**NORTHEASTERN UNIVERSITY –** Boston, MA Sep 2023-Present

*Khoury College of Computer Sciences, College of Arts, Media, & Design*

Candidate for B.S. in Computer Science and Music with Concentration in Music Technology and Minor in Mechanical Engineering
Expected Graduation: May 2027 | John Martinson Honors Program | Dean's List | National Recognition Scholar

- Cumulative GPA: 3.65/4.0
- Activities: Recreational Climbing Team (Communications Chair) | Oasis Software Development | Chamber Ensemble | Ballroom
- Relevant Courses: Algorithms & Data | Object-Oriented Design | Fundamentals of Computer Science 1 & 2 | Discrete Structures | Projects in Cloud Computing | Computer Music Fundamentals | Acoustics & Psychoacoustics of Music | Intro to Music Technology | Foundations of Cybersecurity

## SKILLS

Programming Languages: C# (proficient), C++ (beginner), CSS (prof.), HTML (prof.), Kotlin (intermediate), Java (prof.), JavaScript (prof.), Python (inter.), Racket (prof.), TypeScript (prof.), XAML (prof.)
Concepts: Algorithms, Browser extension development, Development for Chrome Web Store, Complexity analysis, Data structures, Debugging, Domain & website deployment, Object-oriented & dynamic programming, Testing
Languages: English (native), Mandarin (native), Spanish (intermediate)

Applications: Ableton, Audacity, Dr. Racket, Eclipse, Intellij, Jupyter, Kontakt, Max/MSP, Pro Tools, Unity, Unreal Engine + Blueprint Visual Scripting System, VirtualBox, Visual Studio + VS Code
Tools & Libraries: AWS, Cloudflare DNS, Git, LaTeX, Leaflet.js, Node.js, Pandas + NumPy libaries, Supabase, Vercel
Frameworks: Junit, Next.js, React Native, Windows Presentation Foundation (WPF)
Other: JSON, Music composition & production, Music theory (12+ yr.), Piano (14+ yr.), Writing

## PROJECTS – *Links to all projects can be found on raeyan.org.*

**OPENBNB** – Nov 2024 | *CSS, HTML, JavaScript, JSON, Leaflet.js, Next.js, React, TypeScript, Vercel*

- Developed the front-end architecture for OpenBnB, a platform connecting disaster evacuees with local hosts.
- Collaborated with a team of three to build a user registration database with Firebase, implemented geolocation for host listings, and deployed the platform on Vercel.

**URBAN REFUGE MAP** – Nov 2024 | *CSS, HTML, JavaScript, Jupyter, Leaflet.js, Python, Vercel*

- Executed an interactive geographic information system (GIS) to display critical resources for refugees, optimizing for clarity and usability.
- Partnered with a team of three to streamline map integration with Urban Refuge's existing site (urbanrefuge.org) and deployed the solution on Vercel.

**REBEAT** – Oct 2024-Present | *C#, Debugging, Testing, Unity, Visual Studio, Windows Presentation Foundation, XAML*

- Built a video game launcher using WPF and 2D combat-based video game using Unity Game Engine.

**FREE FOR ME [OASIS]** – Sep 2024-Present | *CSS, Data structures, Objected-oriented & dynamic programming, Git, HTML, JavaScript, Node.js, Supabase*

- Collaborated with a team of 4 to design a website called Free for Me enabling university students in Boston to discover student discounts available to them based on their school.
- Scraped data from websites of Boston attractions, shops, schools, and blogs to populate a database in Supabase.

**GARMENT GENIE** – Nov 2022-Present | *Browser extension development, CSS, Development for Chrome Web Store, Git, HTML, JavaScript, JSON, Node.js*

- Programmed a Chrome browser extension that recommends similar clothing items on thredUp.com as alternatives to products on shein.com.
- Parsed source/DOM code from the Shein item page and matched it to similar items on thredUp using a recommendation logic function.
- Currently under review for publication to the Chrome Web Store.

**LIGHT 'EM ALL** – Apr 2024 | *Algorithms, Data structures, Debugging, Eclipse, Java, Object-oriented & dynamic programming, Testing*

- Engineered a game called Light 'Em All in which the player must connect all tiles with pipes to light up the entire game board.
- Implemented breadth-first search and Kruskal's algorithm to determine conditions for the completed board and if the player has won.

**DESTROY DR. RACKET** – Nov 2023-Dec 2023 | *Ableton, Kontakt, Music composition & production, Music theory, Unity Engine*

- Developed a 3D textured boss model in Unity for a movement FPS (first-person shooter) video game in which the player must fight the team as bosses to progress to Dr. Racket, the final enemy.
- Composed and produced all boss themes.

**SUGAR SPRINT** – Oct 2023 | *Ableton, Kontakt, Music composition & production, Music theory*

- Composed and produced the soundtrack for Sugar Sprint, a 2D platformer game about a girl made of candy and her dog,

## WORK EXPERIENCE

**JOHNS HOPKINS WHITING SCHOOL OF ENGINEERING** – Baltimore, MD | Sep 2022-May 2023 | *Research Intern*

- Investigated plastic waste conversion methods with Environmental Engineering Professor Wang and graduate student Han Zong.
- Studied upcycling techniques and explored the design of more sustainable plastics.

## OTHER ACTIVITIES

**PIANO & MUSIC THEORY –** 2010-Present

- Accompanied 15+ clients for musical performances and collaborated as a team to produce cohesive shows.
- Achieved 7 Distinctions and 7 Merits in 16 Trinity College London Examinations for piano and music theory while taking private lessons.
- Selected as a member of Northeastern University's audition-exclusive chamber ensemble.

## HONORS & AWARDS

AP Scholar Award with Distinction, AP Scholar Award May 2020, May 2021, May 2023
National Merit Commended Student Oct 2022
FAPAC/FDA/NIH/Parklawn Chapters 2022 Best Community Project Award Aug 2022