

# Rae (Rachel) Yan

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## EDUCATION

**Northeastern University** – *Candidate for B.S. in Computer Science & Music with Concentration in Music Technology* | Dec 2026 | Boston, US  
John Martinson Honors Program | Dean's List | National Recognition Scholar | GPA: 3.8/4.0

- Relevant Courses: Acoustics & Psychoacoustics of Music | AI for Musical Innovation | Algorithms & Data | Composing with Digital Technologies | Computer Music Fundamentals | Foundations of Cybersecurity | Fundamentals of Software Engineering | Human-Computer Interaction | Introduction to Databases | Music Perception & Cognition | Object-Oriented Design | Projects in Cloud Computing

## SKILLS

**Programming Languages:** Advanced: C++, CSS, HTML, Java, JavaScript, TypeScript | Intermediate: C#, Python, R, Racket

**Tools & Libraries:** AWS, Command Prompt, Git, Google Apps Script, LaTeX, MongoDB, Mongoose, Node.js, React, Socket.IO, Vercel

**Concepts:** Algorithms, Agile, Complexity analysis, CI/CD, Data structures, Object-oriented & dynamic programming, RegEx, Unit/integration/E2E testing, Web development

**Frameworks:** Express.js, Next.js, React Native

**Applications:** Ableton Live, Audacity, Blueprints Visual Scripting, Dr. Racket, Eclipse, Figma, IntelliJ, Jupyter, Kontakt, Max/MSP, Pro Tools, Reaper, Unity, Unreal Engine, VirtualBox, Visual Studio, Visual Studio Code

**Languages:** Native: English, Mandarin | Intermediate: German, Spanish

**Other:** APIs, Compression, Digital signal processing, JSON, Machine learning, Media planning, MIDI, Music composition & production, Music theory, Piano, Sampling, Vocoders

## WORK EXPERIENCE

**Northeastern Media Studios** – *Production Studios Assistant* | Oct 2025-Present | Boston, US

- Operated and maintained broadcast and recording equipment across a full-scale production facility, including a television studio, three recording labs, and a dedicated podcast room.
- Audio-engineered and provided technical support for client sessions by troubleshooting issues across hardware, software, and audio interfaces, including Solid State Logic (SSL) consoles and Pro Tools systems.

**Scout Studio** – *Senior Developer* | Aug 2025-Present | Boston, US

- Led development for a client website (The Student Kitchen) using HTML, CSS, & JavaScript, translating design prototypes into functional, production-ready features.
- Mentored and upskilled 2 Junior Developers through code reviews and pair programming, promoting shared learning and accountability within the team.
- Implemented and maintained a comprehensive CI/CD pipeline with a full testing suite (unit, integration, E2E).

**Black Soup GmbH** – *Software Engineering & Marketing Co-Op/Intern* | Feb 2025-Jun 2025 | Berlin, DE

- Led 4 organic marketing campaigns for video game titles (Lost Records: Bloom & Rage, Memoriapolis, Palia, Rooftops & Alleys), executing influencer outreach and digital strategy that collectively garnered over 5M impressions and 250K engagements across social platforms (YouTube, Twitch, X, TikTok).
- Acted as a primary point of contact for major clients (KRAFTON, Radical Theory, Riot Games, Singularity 6), presenting campaign performance data that contributed to 2 contract renewals and secured a 15% increase in a quarterly paid media budget from one client.
- Managed and coordinated a total of 10+ paid creators, facilitating content creation and timely payments, which directly contributed to driving over 1M combined views on campaign-related content.
- Engineered Google Apps Scripts to automate media planning and reporting, decreasing campaign setup errors by 90%.
- Contributed to designing a centralized campaign database by migrating 4+ years of historical data, decreasing the average time for building media plans from 4 hours to 1 hour and enabling data-driven strategy shifts.

Proofread and revised the English localization of PEPPERED on Steam in assistance for the official game launch.

## PROJECTS

**NUCircle** – Sep 2025-Present

- Architected and implemented a real-time, full-stack TypeScript platform after code onboarding, featuring RESTful APIs with OpenAPI validation, JWT authentication, and real-time messaging via WebSocket connections.
- Built a real-time multiplayer trivia game system using Socket.IO and Express.js, featuring synchronized game state management and persistent sessions stored in MongoDB.
- Collaborated in a team of four using Git for version control, following agile practices to deliver features iteratively.

**Garment Genie** – Nov 2023-Present

- Programmed a full-stack browser extension that analyzes product data and DOM elements on Shein product pages to recommend similar clothing items on Depop, Poshmark, ThredUp, and Vinted with over 85% accuracy.
- Developed the core recommendation logic algorithm and built a system to track user history, demonstrating end-to-end feature ownership from concept to deployment.

**OpenBnB** – Nov 2024

- Developed the front-end architecture with a cross-functional team of four for a disaster relief platform using React, implementing user authentication, geolocation services for listings, a user registration database with Firebase, and deploying the platform on Vercel.

**Light 'Em All** – Apr 2024

- Engineered a pipe-connection puzzle game implementing breadth-first search and Kruskal's algorithm for win-condition validation and procedural board generation.

**Sugar Sprint** – Oct 2023

Composed and produced 1 soundtrack for a 2D platformer game.