Dylan Lee

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EDUCATION

Brown University, *B.S. in Computer Science*, 3.893/4.0 GPA — Providence, RI | Expected Graduation May 2025
Relevant Courses**:** Advanced Computer Graphics, Advanced Computer Animation, Topology, Complex Analysis
The Dalton School, 3.97/4.00 GPA — New York, NY | Class of 2021
Awards: Brown Senior Prize in Computer Science, Billy Farrell Award for outstanding citizenship, Two Scholastic Gold Keys

ANIMATION EXPERIENCE

Duolingo Technical Animator Internship — Pittsburgh, PA | May 2024 – August 2024

- Created graphing prototypes in Rive 2D for Duolingo's math lessons, as well as a polished interactive parabola asset.
- Animated dynamic props for Duolingo Adventures and learned principles of motion graphic design.
- Developed a 3D rendering system entirely within Rive's 2D framework, presented the results directly to the Rive team.
- Discovered a feedback loop bug in Rive and used it to create procedural animations, physics demos, and crowd simulations.

PROJECTS

Advanced Animation Production: Updrafts — Providence, RI | August 2023 – Present

- Works with a team of 12 to create a 6 to 8 minute long 3D animated short film. Wrote the story + storyboard with a team of 4.
- Modeled the protagonist of the film in Blender and rigged them in Maya. Lays out and animates shots in Maya.
- Leads the music and tech support teams for the project, responsible for film scoring and version control.

Computer Animation Final Project: Maya — Providence, RI | March 2023 – May 2023

- Spent 3 months designing, rigging, and animating a mechanical character(featuring moving linkages on the head and an articulated wheel for legs) and more than 9 environments in Blender for a 3 minute long self directed short film.
- Composed, wrote lyrics for, and recorded an original song for the film's soundtrack.
- Created fourteen detailed illustrations of each and every student's character design and included it in the credits.

Software Engineering Term Project: Tunedin — Providence, RI | November 2022 – December 2022

- Collaborated with a team of 3 to design and create an app called Tunedin, where users can log in and view an interactive display of their friends' music history, as well as receive recommended matches with other users of similar music taste.
- Developed a physics-based UI animation using React, TypeScript, and SVG graphics to represent users as bubbles that spatially sort themselves by the energy of the songs they're listening to. Completed without any external libraries.
- Used hyperbolic secant as an easing function for bubble repulsion and reduce bubble overlap for visual clarity.

Independent Research: Desmos — New York, NY | March 2015 – Present

- Creates soft body simulations, cellular automata, platformer games, 3D render engines, origami folding simulations, and organic walking simulations using nothing but implicit and parametric equations in Desmos online graphing calculator.
- Discovered and documented a bug in Desmos that transformed the graphing app into a tool capable of computer-like recursion, allowing users to create interactive simulations in Desmos. Desmos team took inspiration from the bug and decided to integrate an official tool for recursion into the program.
- Achieved the title of finalist in the Desmos 2021 Global Math Art Competition for a playable pinball machine in Desmos.

MATH EXPERIENCE

Hampshire College Summer Studies in Mathematics — Amherst, MA | June 2023– August 2023

- Learned about and taught classes on functions, sets, Desmos, hamming codes, and vector spaces to high school students.
- Wrote problem sets exploring class topics in greater depth and provided feedback on student proofs.
- Gave presentations on independent research covering fractal geometry, procedural walk cycles, and programming in Desmos.

Self Employed: Private Math Tutor — New York, NY | September 2020 – May 2023

- Planned and conducted tutoring sessions on topics such as fractional exponentiation, factoring, and solving nested algebraic equations. Created optional bonus problems for students to encourage a deeper exploration of topics covered during class.
- Used Desmos and hand-drawn diagrams as visual tools to illustrate abstract concepts encountered during lessons.

LEADERSHIP EXPERIENCE

Brown Taekwondo, *Instructor* — Providence, RI | January 2022 – May 2025

- Led practices, demonstrated techniques, and held office hours for team members of Brown's D1 Taekwondo team.
- Coached team members and managed logistics, safety, and general team morale during tournaments.
- Promoted the core tenants of taekwondo by teaching courtesy, integrity, perseverance, self control, and indomitable spirit.
- 2024 Collegiate Nationals Men's Poomsae Gold Medalist.

SKILLS & INTERESTS

Technical Skills: Java, React, Typescript, JUnit testing, Rest APIs, Rive, Maya, Blender, Fusion360, Premiere Pro, Desmos
Language: English, Intermediate proficiency in Mandarin, Beginner proficiency in Spanish.
Interests: Desmos, Woodworking, Illustrating, Guitar composition, Taekwondo, Dance, Skateboarding, and Computer animation.