Dakota Erskine

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Education

8/2022-5/2026 B.S. in Computer Science, Rensselaer Polytechnic Institute
8/2022-5/2026 B.S. in Electronic Arts, Rensselaer Polytechnic Institute
8/2024-12/2024 Study Abroad, Nanyang Technological University Singapore
8/2018-6/2022 Advanced Regents Diploma, Brooklyn Technical High School

Experience

8/2025-12/2025 Rensselaer Polytechnic Institute, Undergraduate Programming Mentor
1/2025-5/2025 Rensselaer Polytechnic Institute, Undergraduate Programming Mentor
Hosted office hours for students in RPI's Introduction to Algorithms course. Provided one-on-one guidance to students, helping them to understand fundamental concepts in algorithms and improve their problem-solving skills. Assisted with grading assignments and providing constructive feedback to students.

7/2022-8/2022 Jesse James Creative Inc, Junior Front End Developer
Developed and optimized front-end interfaces for websites and custom software, improving user experience and responsiveness. Connected these interfaces to various back-end systems, including the company's custom CMS. Contributed to the design and functionality of several websites.

Projects

7/2025-8/2025 Spectral Path Tracer
A path tracer that traces rays in spectral space using wavelength sampling. The renderer traces rays at sampled wavelengths, computes wavelength-dependent material interactions, and reconstructs the final image from spectral samples to produce physically plausible structural color.

2/2025-4/2025 Rendering Iridescence in Multilayer Structures
A physically-based technique for rendering iridescence caused by thin-film interference using the transfer matrix method. The model is implemented as part of a Whitted-style ray tracer and additionally incorporates spectral sampling and noise-driven thickness variations to simulate realistic interference patterns within stacks of arbitrarily many layers.

Honors and Awards

12/2023-present	Upsilon Pi Epsilon, Member
8/2022-5/2026	Rensselaer Leadership Award
1/2023-7/2025	Dean's Honor List