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I am a new grad from Brown University who is deeply passionate about Computer Science, pursuing visual computing in my studies! I've gained experience by implementing papers, creating independent projects, and doing lab research in Computer Graphics, Computer Vision, and Deep Learning.

LANGUAGES & FRAMEWORKS

- Proficient in C++, Python (inc. TensorFlow), OpenGL, familiar with Java, C, Rust, Go, Javascript, React, Chakra

EXPERIENCE

Authoring Landscapes w/ Ecosystem and Terrain Erosion Simulation, 2024
- Implemented and built upon several modern Computer Graphics research papers on ecological phenomena
- Developed simulations for rainfall, sediment transport, and erosion on layered land model to generate realistic, natural landscapes and rendered via custom OpenGL Shaders
- Skills: Rust, OpenGL, Stochastic Simulation, Procedural Generation, Research Paper Implementation

"Eaglevision" Classification w/ Convolutional Neural Network, 2022
- Acted as lead developer, designed deep network architecture that achieved 86% identification acc. on 200 classes, near research-level accuracy on a laptop
- Skills: Python, Tensorflow, CNN/Convnet, Data Augmentation, Computer Vision

Realtime "Veggie Mountain Scene" Renderer, 2022
- Generated and textured mountains procedurally using custom multi-octave perlin noise function, ray traced god rays, and parallelized Bezier camera movement for realtime mountain scene
- Wrote vertex and fragment shaders in GLSL for camera movement, texture-mapping, and Phong illumination
- Skills: C++, OpenGL, Ray Tracing, Procedural Generation

Ray Tracer and Path Tracer, 2024
- Wrote ray and path tracers, producing photo-realistic rendered images
- Implemented indirect lighting, fresnel refraction, and soft shadows, supported diffuse, glossy, and mirror surfaces, ultimately allowing physically accurate rendering of any material
- Skills: C++, Ray Tracing, Path Tracing, Monte Carlo Integration, Research Paper Implementation

Research at Interactive 3D Vision & Learning Lab, 2023
- Created pipeline to use data from custom multiview camera capture system, determine camera extrinsics using COLMAP, and train Neural Radiance Field (NeRF) models
- Significantly accelerated via automation project goal of generating high-quality models for NeRF libraries
- Implemented series of DL networks, including Transformer and RNN based LMs and GANs
- Skills: Python, PyTorch, Deep Networks, 3D Reconstruction, Computer Vision, Language Models, Gen AI

LEADERSHIP

Founder & Lead Writer, Brown Puzzlehunt/Brown Puzzle Club, 2021-2024
- Founded Brown Puzzlehunt (yearly event w/ 1000+ participants) and Brown Puzzle Club
- Personally responsible for content and editing of all (35+) puzzles, managing 20+ writers for each hunt
- Grew the event/club from the ground up, eventually winning Brown's Event of the Year Award

EDUCATION & AWARDS

Brown University, Providence, Rhode Island, graduated June 2024
- Degree: BS Computer Science with Visual Computing, AI/ML Pathways
- CS Coursework: Adv. Graphics* (1 yr.), Computer Vision*, Systems, Security*, Deep Learning*, Blockchain*
- Awards: UTRA Research Grant at Interactive 3D Learning & Vision Lab; Event of the Year, Brown Puzzlehunt
- Teaching Assistant for Computer Vision (senior/graduate seminar)
- Add'l Coursework: Linear Algebra, Statistics, Abstract Algebra*, Real Analysis*, Adv. Logic*, Japanese Lit.

*Senior/Graduate seminar

EDUCATION & AWARDS (cont.)

Phillips Exeter Academy, Exeter, New Hampshire, graduated June 2020

- 1570 SAT, Highest Academic Honors (1st Quintile)
- Highest level CS, 4 years Japanese, Senior sem. at Seikei Tokyo, Varsity Cycling & Track, Outdoors Club Co-head

INTERESTS

- Fluent in Japanese, spent 6 months at Keio University in accelerated language program, 8 years total study
- Ongoing obsessions include bouldering, reading manga, hyperpop and ambient music, and FX's The Bear
- Multi-ethnic/cultural: Lived 1 year in Tokyo, 8 months in London, traveled to 4 continents and 10+ countries