



SEBASTIAN H. PARK

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CONTACT

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Providence RI 02912

EDUCATION

BROWN UNIVERSITY

Providence, RI, 2021-25 (exp)

Computer Graphics,
Linguistics. GPA: 4.0

Coursework:

Advanced Computer Graphics

Comp. Photography

Computer Animation

Deep Learning

Data Structures and Algo.

Computer Systems

Linear Algebra

Theory of Computation

Computational Linguistics

Software Security

Discrete Math

Clubs:

Game Design Club

Acapella (beatbox & director)

Jazz Band (Piano)

MILTON ACADEMY

Milton, MA, 2017-2021

SAT: M-770, V-780

Awards:

Head of School Award,

Cum Laude Society,

Abell Prize for Music

The Chinese Prize

The Computer Science Prize

Duncan Prize for Math

The Science Prize

Derby Prize for Math.

SKILLS AND INTERESTS

Technical Concepts:

Full-stack Engin. (mobile, web)

Computer Graphics + Vision

Game Development

Natural Language Processing

Data Science

Computer Systems

Creative:

Video Prod. and VFX

Graphic Design

3D Animation

Vocal Arrangement

Jazz Improvisation

Beatboxing

Interpersonal Skills:

Sense of Humor

Group Leadership

Communication

Creativity

Mandarin Chinese

Spanish

Languages, Softwares, and Frameworks:

C, C++, C#, Python, Java, JavaScript, HTML, CSS, Unity, OpenGL, Three.js, Flutter, Dart, Node, React, Kotlin, Git, Linux, MacOS, Adobe Illustrator, Blender, Maya, GLSL

PROFESSIONAL EXPERIENCE

COMPUTER GRAPHICS HEAD TEACHING ASSISTANT, BROWN UNIVERSITY

Providence, RI | Fall 2022 - Fall 2024

- Developed coursework and assisted administration of 100+ student course.
- Assisted instruction in 2D raster graphics, raytracing, and real-time rendering with OpenGL.
- Held four office hours a week, facilitated discussion section, graded student assignments, personally mentored 10 students.

COMPUTATIONAL RESEARCH INTERN, NASA

New York, NY | Summer 2024

- Engineered novel [computational models](#) for phytoplankton UV light interaction in Python ([abstract](#)).
- Collaborated with NASA remote sensing scientists to adapt light models for NASA PACE satellite mission.

GAME DEVELOPMENT INTERN, NASA

Remote | Summer 2023

- Developed an educational, data-driven, multiplayer climate-crisis simulation with Unity, C#, and Python.
- Worked on game graphics and climate simulation in team of four developers.

SOFTWARE DEVELOPMENT INTERN, M. STEINERT & SONS

Boston, MA | Summer 2022

- Single-handedly designed and developed proprietary contact transfer and management software in Node.js and GraphQL.
- Used to manage contacts for piano dealership with 20,000+ clients across New England.

ANDROID DEVELOPMENT INTERN, BRAIN POWER, LLC

Cambridge, MA | Summer 2020

- Developed Augmented Reality emotional education software for Face2Face Empowered Brain product on Google Glass in Android.

RECENT PROJECTS

UNBIASED PATHTRACER

2024

Created a path tracer, a Monte-Carlo based 3D renderer in C++. Area lighting, soft shadows, diffuse, glossy, and mirror surfaces, attenuative refraction, and depth of field.

OCEAN WAVE SIMULATION

2024

Used FFT and ocean optics to computer simulate realistic water in real time. In charge of shaders. OpenGL, GLSL.

CHERRY BLOSSOM PAINTING [CHERRYBLOSSOMGARDEN.NETLIFY.APP](#)

2023

Used JavaScript, THREE.js, WebGL to create a procedurally generated cherry blossom garden scene with interactive L-System tree and water simulation, rendered to look like a Nihonga painting.

REALTIME SCENE VIEWER AND MULTITHREADED RAYTRACER

2022

Realtime graphics engine with C++ and OpenGL to parse JSON data and render a traversable scene with camera rotation, adaptive level of detail. Created a multi-threaded raytracer to render the parsed scene with Phong lighting model with point lights, spot lights, anti-aliasing, texture mapping, recursive reflections, super sampling.