Rebecca Feng

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Education

University of California, Berkeley, BA in Computer Science and Astrophysics *2021 – 2025*

Relevant Coursework: Computer Graphics; Computer Vision; Machine Learning; Computational Photography; Data Structures and Algorithms; Computer Architecture; 3D Modeling and Animation; Game Design and Development; Discrete Differential Geometry; Abstract Linear Algebra; Mathematical Physics

Skills

Languages: Python, C++, GLSL Shaders, CMake, C, Java, HTML/CSS/JavaScript, Linux/Unix script

Extensions: OpenGL, Maya API, NumPy, SciPy, PyTorch, Node.JS, Three.JS, React.JS

Software: Visual Studio Code, XCode, Vim, Github, Autodesk Maya, Unity, Blender, ZBrush, Adobe 3D Substance Painter, Adobe Creative Cloud, Google Drive, Microsoft Office

Experience

Researcher, Nerfstudio @ Berkeley Artificial Intelligence Research – Berkeley, CA *February 2024 – Current*

- Developed an artist-friendly tool enabling users to composite Neural Radiance Field scenes with rendered animation and VFX in Autodesk Maya, soon featured in popular blog https://radiancefields.com
- Developed an API to simulate lighting and shadows in ThreeJS and implemented spherical harmonics for view-dependent effects for gaussian splats with WebGL shaders.
- Tools Used: Python, Typescript, WebGL, ThreeJS, technical direction, NumPy, Linear Algebra

Head Course Instructor, UCBUGG: 3D Modeling and Animation – Berkeley, CA *July 2022 – Current*

Course Instructor July 2022 - June 2024 *Head Instructor June 2024 - Current*

- Developed a curriculum teaching students the whole pipeline of 3D animation with industry-standard software
- Mentored teams to produce a short-film, helped reconstruct a new course website, brought in guest speakers from Pixar, Skydance Animation, Dreamworks, Meta, and Blizzard to give personalized feedback to students
- Raised $700 in grants to purchase online render services for students to render their shorts fast and efficiently, reducing over-time office hours for instructors and ensuring completion of students' shorts before showcase
- Raised $3200 in grant funds for students to purchase industry-standard software and use online renderfarms
- Tools Used: Autodesk Maya, Renderman, ZBrush, AfterEffects, Linux, React.JS, Three.JS, Github

Teaching Assistant, CS 184: Computer Graphics and Imaging - Berkeley, CA *Jan - May 2025*

- Helped to organize a class of around 300 students to teach foundational topics in computer graphics. Led discussion section, held office hours, and graded projects.
- Tools Used: C++, GLSL, OpenGL, Github, Visual Studio Code, XCode, communication, team-building

Student Volunteer, 2024 ACM SIGGRAPH - Denver, CO *July – Aug 2024*

- Assisted in organizing and managing conference sessions, workshops, and panel discussions.

Projects

Steve Bobs Mesh Painter 2.1 *Apr - May 2024*

- Created an interactive web tool as a team to streamline texturing assets via standard mesh processing techniques
- Implemented raycasting, main code framework, UI elements, texture coordinate buffer, and a WebGL display.
- Project Showcase Winner out of 80 teams in Sp24 Computer Graphics and Imaging course
- Tools Used: C++, HTML, CSS, JavaScript, Three.JS, Node.JS, Vite.JS, WebGL, GLSL Shaders, mesh processing

Physics Based Pathtracer *Mar 2024*

- Created a direct and global illumination raytracer in C++ including Monte-Carlo estimation, Bounding Volume Hierarchies, Russian Roulette, and Adaptive Sampling, and metallic material properties
- Tools Used: C++, HTML, CSS, physics simulation, rendering

A Home for Anderson - Unity3D Game *Oct - Dec 2023*

- Led a team of programmers and artists to develop script code for the game and create 3D assets and characters
- Tools Used: Unity, C#, Github, Autodesk Maya, Visual Studio Code, game development