Rebecca Feng

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https://github.com/beckyfeng08

Education

University of California Berkeley
Overall GPA: 3.611/4.0
Computer Science GPA: 3.82/4.0
B.A. Astrophysics, Computer Science
2021-2025

Skills

Computer
Linux/Unix, Python, Java, C, C#, C++,
SQL, HTML, CSS, JavaScript, BootStrap,
PyMel, RISC-V Assembly

Libraries
NumPy, AstroPy, SciPy, Matplotlib, Pandas,
Maya.cmds, PyQT
Software
Autodesk Maya, ZBrush, Unity, Blender,
3D Substance Painter, Photoshop, Illustrator,
Premiere Pro, AfterEffects, Procreate,
Github, Google Drive, Microsoft Office

Coursework

- Computer Graphics and Imaging
- Machine Learning
- Video Game Design &
     Development
- 3D Modeling and Animation
- Abstract Linear Algebra
- Linear Algebra (A)
- Differential Equations (A)
- Efficient Algorithms (A-)
- Data Structures and Algorithms (A)
- Computer Architecture (A)
- Concepts of Probability (A-)
- Physics: Mechanics and Relativity
- Physics: Electricity, Magnetism, and Optics
- Physics: Thermodynamics and
     Quantum Mechanics
- Mathematical Methods in Physics

Awards

2021 Science Ambassadors Video
     Scholarship Runner-Up

Experience

Undergraduate Researcher @ NeRFStudio - Berkeley Artificial Intelligence Research Labs
February 2024 - Current
- Currently writing a Python script for a VFX Maya plug-in allowing for users to combine Neural Radiance Fields with animation and VFX by transferring volumetric, AI-trained NeRF data to point clouds and dealing with linear transformations in camera and world space.

Course Instructor - UC Berkeley Undergraduate Graphics Group
August 2022 - Current
- Worked as a team to develop a curriculum that teaches students the entire pipeline of 3D animation using DCC software such as Autodesk Maya, Renderman, ZBrush, and AfterEffects
- Mentored a short-film production by teams of four
- Currently reconstructing a new course website using front-end technologies such as React.JS and Three.JS and Github as a host
- Hosted a Discord Bot on public Linux computers via SSHing, and using Screen commands

Treasurer - 3D Modeling and Animation at Berkeley
April 2023 - Current
- Handled finances, helped with marketing , and organized events across campus

Projects

Backend Programmer - Physically Based Path Tracer
February- March 2024
- Created a direct and global illumination raytracer in C++ using various techniques in raytracing such as Monte-Carlo estimation, Bounding Volume Hierarchies, Russian Roulette, and Adaptive Sampling
- Implemented a microfacet model to render isotropic rough conductors

Backend Programmer - Mesh Editor
February 2024
- Implemented various mesh-editing techniques in C++ using the half-edge data structure, such as edge flipping, splitting, and Loop subdivision. Also implemented De Casteljau's Algorithm for Bezier curves
- Created a toon-style fragment shader using OpenGL tools

Director, Tech Artist, Programmer - Home for Anderson
October - December 2023
- Led a game team of 6 to build a 3D RPG puzzle game using Unity 3D
- Wrote scripts in C#, modeled assets, rigged and animated characters using Autodesk Maya