

# Ethan Buttimer

COMPUTER GRAPHICS · SOFTWARE ENGINEERING · 3D ANIMATION PRODUCTION

🏠 ethanbuttimer.github.io | 📞 (847) 609-0701 | ✉ ethan.buttimer@gmail.com | 📺 ethanbuttimer

## Education

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### University of California, Berkeley

Fall 2018 - Spring 2022

**COMPUTER SCIENCE B.A. AND CERTIFICATE IN DESIGN INNOVATION. GRADUATED MAY 2022.**

**GPA: 3.96/4.00**

**Coursework:** Computer Graphics (C++, GLSL), 3D Modeling and Animation (Maya, Houdini), Computer Vision (PyTorch), Machine Learning, Computer Architecture (C, RISC-V), Functional Programming (Python, SQL), Data Structures (Java), Virtual Reality (C#), Discrete Math and Probability, Linear Algebra, Differential Equations, Multivariate Calculus, Design Methodology, Film History, Sound and Music Computing

**Activities:** Treasurer of 3D Modeling and Animation at Berkeley, Pianist in Chamber Music Ensemble, Cal Hiking and Outdoor Society (CHAOS)

**Honors:** Phi Beta Kappa Honors Society, Upsilon Pi Epsilon CS Honor Society, Sigma Phi Epsilon Balanced Man Scholarship Winner

### The Animation Collaborative

Fall 2019

**INSTRUCTOR MICHAL MAKAREWICZ OF PIXAR ANIMATION STUDIOS**

**Coursework:** Fundamentals of Animation

### Out for Undergrad (O4U) Tech Conference Participant

Oct 2021

## Experience

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### Microsoft

Aug 2022 - Present

**SOFTWARE ENGINEER, CLOUD+AI**

- Improved reliability, security, and speed of the Azure Front Door content delivery network

### DreamWorks Animation

Mar 2022 - Jul 2022

**DEPARTMENT TECHNICAL DIRECTOR**

- Developed plugins for Houdini, supporting FX artist workflows
- Improved render management in the cloud-based PipeX production pipeline

### UCBUGG 3D Modeling and Animation

Jan 2020 - May 2022

**HEAD COURSE INSTRUCTOR**

- Delivered lectures and developed lab assignments related to the 3D animated film pipeline
- Provided technical support and guidance to student production teams
- Led course staff meetings, organized events, and managed finances

### Geopogo

Aug 2020 - Aug 2021

**SOFTWARE ENGINEERING INTERN**

- Developed and tested a procedural wall generator, powered by interactive Bezier splines (Unity, C#)
- Designed user interfaces and tools for an architectural modeling editor and a mobile AR application

### Coding4Youth Inc.

Jun 2019 - Aug 2021

**COURSE CONTENT DEVELOPER AND ONLINE PROGRAMMING INSTRUCTOR**

- Created projects, quizzes, and lecture slides for courses on Python, JavaScript, HTML/CSS, Scratch, Roblox Studio, and Lua
- Taught interactive courses on creative programming and game development to over a hundred students

## Projects

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### Mirage (3D Animated Short Film)

Sep 2020 - Jun 2021

**TECHNOLOGY AND SIMULATION LEAD, CNM190 ADVANCED DIGITAL ANIMATION PRODUCTION TEAM**

- Programmed custom tools to improve texturing and effects workflows (Python, MEL)
- Created procedural particle simulations for the main disintegration effect (Houdini)
- Modeled, shaded, rigged, and animated 3D models (Maya, Substance Painter, RenderMan, After Effects)
- Supervised version control and asset management (Git)

## **Path-Traced Blackbody Glow Simulation**

*Spring 2020*

### **SOFTWARE DEVELOPMENT TEAM MEMBER, COMPUTER GRAPHICS AND IMAGING (CS184) FINAL PROJECT**

- Implemented emission and reflection calculations based on material attributes, temperature distributions, and physical laws
- Programmed core path-tracing algorithms (C++)
- Conducted performance testing and implemented color spectrum caching

## **Automatic Panorama Stitching**

*Fall 2021*

### **COMPUTATIONAL PHOTOGRAPHY AND COMPUTER VISION (CS194-26) PROJECT**

- Computed correspondence points between images using feature extraction and matching (Python, OpenCV)
- Applied regression techniques to determine optimal image transformations
- Seamlessly blended transformed images into a panorama