

Ethan Buttimer

COMPUTER GRAPHICS · SOFTWARE ENGINEERING · 3D ANIMATION PRODUCTION

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Education

University of California, Berkeley

Fall 2018 - Spring 2022

COMPUTER SCIENCE B.A. AND CERTIFICATE IN DESIGN INNOVATION. EXPECTED GRADUATION MAY 2022.

GPA: 3.97/4.00

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: Upsilon Pi Epsilon CS Honor Society, Sigma Phi Epsilon Balanced Man Scholarship Winner, National Merit 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

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

UCBUGG 3D Modeling and Animation

Jan 2020 - Present

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

Coding4Youth Inc.

Jun 2019 - Aug 2021

COURSE CONTENT DEVELOPER AND ONLINE PROGRAMMING INSTRUCTOR

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

Projects

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