Annie (Yue Hua) Lin

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EDUCATION

University of California, Berkeley | Berkeley, CA Expected Graduation: May 2024
B.A. - Applied Mathematics, concentration in Computer Science. *Cum. GPA: 3.3*
Coursework: Computer Graphics & Imaging, Full Stack iOS Development, Linear Algebra, 3D Modeling & Animation
Activities: Cal Hacks (Director), Society of Women Engineers (Officer), Asians in Animation (Assc. Director), ACM SIGGRAPH (SV)

SKILLS & TECHNICAL TOOLS

Languages: C++, Java, Python, SwiftUI, JavaScript, HTML/CSS, SQL
Frameworks/Tools: Git, Google Cloud, Firebase, Postman, FFmpeg, OpenColorIO, OpenImageIO, Kakadu, Linux, MacOS
Software: Autodesk Maya, Nuke, Adobe Creative Cloud (Illustrator, Photoshop, After Effects), Figma, Unity

EXPERIENCE

Software Engineer Intern | Walt Disney Animation Studios May 2023 – Present

- Working as 1 of 5 engineers on the Studio Tools team responsible for maintaining and developing Linux/macOS projects and iPad-based tools that support media playback and the filmmaking process.
- Currently implementing HDR support into iPad playback tool through 32-bit/16-bit EXR image compression and HEVC (H.264) proxy generation using FFmpeg, Kakadu, OpenColorIO, OpenImageIO, Python, and C++.
- Collaborate with color scientists and media engineers to identify, assess, and understand HDR requirements (e.g. bit depth, color space, file formats, etc.) with respect to existing iPad tool capabilities.

Software Engineer Intern | Rocket Lawyer Jan 2023 – March 2023

- Worked part-time as 1 of 6 engineers on the Documents team to monitor, debug, and remedy issues related to Rocket Lawyer's legal document automation web-based application.
- Built new feature on the backend that supplements information about a document during the generation process using Java, Docker, Kubernetes, Google Cloud, Postman, and PostgreSQL.

Academic Intern | UC Berkeley Electrical Engineering & Computer Sciences Sept 2021 – Dec 2021

- Worked with 1 teaching assistant and 2 other academic interns to teach 20+ students functional programming, data abstraction, and object-oriented programming in Python through lectures and weekly lab assignments.

LEADERSHIP

Design Director | Cal Hacks Jan 2023 – Present

- Create branding materials, website mockups, and merchandise design for the world's largest collegiate hackathon.

Project Manager | UC Berkeley Undergraduate Graphics Group Feb 2023 – May 2023

- Managed and contributed to a team of 4 animators to create a 1-minute 3D animation short across the entire graphics pipeline.

Mentor | UC Berkeley Society of Women Engineers Feb 2022 – May 2022

- Developed from scratch a curriculum that taught 6 female-identifying high school students functional programming, problem solving, and algorithm design over the span of 5 weeks through a team-based project using Julia and Jupyter Hub.

PROJECTS

Non-Photorealistic Shaders | C++, GLSL

- Created an interactive .OBJ mesh renderer and implement a series of shaders for non-photorealistic rendering.
- Developed a shader program for the cool-to-warm shading model as described in Amy Gooch's 1998 SIGGRAPH paper, as well as an edge detection algorithm.

Mesh Editor | C++

- Built a triangle mesh editor engine capable of loading and editing basic COLLADA mesh files by using de Casteljau's algorithm to evaluate and draw Bezier curves and surfaces.
- Added support for half-edge mesh manipulations (edge flipping and edge splitting) and loop subdivision.

Image Segmentation | Julia

- Implemented a simplified version of the Chan Vese segmentation method using a matrix update algorithm based on a smooth Heaviside function and stencil buffers for edge detection and curvature filtering.

Black Exodus | React.js

- Developed interactive line charts illustrating the decline in Black student enrollment in Berkeley and Alameda public education based on public record data from the U.S. Census and California Department of Education.
- 2nd place winner for the "Best Interactive Graphic" category in the 2023 Excellence in Student Media competition hosted by the California College Media Association.