

Angelina Yang

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Research interests: computational imaging, optics, artificial intelligence, end-to-end optimization, microscopy.

EDUCATION

Rice University

Doctor of Philosophy, Electrical and Computer Engineering

Houston, TX

Anticipated 2029

University of Rochester

Bachelor of Science, Optical Engineering

Rochester, NY

May 2024

- Minor in Computer Science

RESEARCH EXPERIENCE

Computational Imaging Lab

Houston, TX

PhD Candidate

August 2024 – Present

MiniDeepDOF: Extended depth-of-field scanning fluorescence microscope for low resource tumor margin assessment.

- Identify performance specifications for future goals, balancing cellular resolution with portable form factor.
- Fabricate **end-to-end optimized** phase mask designs using **reactive ion etching** on fused silica wafers.
- Prototype robust systems using optomechanical components and 3D printing, prepared for clinical imaging abroad.
- Evaluate user feedback and clinical results to improve upon current system imaging experience.

Active Perception Lab

Rochester, NY

Tech & Research Assistant

January 2023 – May 2024

Adaptive Optics Visual Stimuli Delivery: External display projection will enable complex psychophysical experiments for studying human eye movements, integrating full color high-frequency visual stimuli into the AO retinal imaging system.

- Publication: B. Moon, G. Linebach, **A. Yang**, S. Jenks, M. Rucci, M. Poletti, and J. Rolland, "High refresh rate display for natural monocular viewing in AOSLO psychophysics experiments," Opt. Express 32, 31142-31161 (2024).

INDUSTRY EXPERIENCE

Skydio: Camera Test Team

San Mateo, CA

Camera Test Engineering Intern

June 2024 – August 2024

Product Specification Evaluation: Led investigation for new product development in preparation for executive review.

- Evaluated custom camera module resolutions based on focal length, f-number, and sensor pixel size using off-the-shelf lenses and sensor development kits from major vendors in both controlled and real-world environments.
- Simulated image quality based on object distance, magnification, and sensor Nyquist frequency to validate outdoor performance against expected results.
- Developed and implemented test protocols to assess SNR, linearity, and resolution for high-sensitivity CMOS sensors.

Intuitive Surgical: Surgical Systems Viewer Team

Sunnyvale, CA

Optical Engineering Intern

May 2023 – August 2023

Viewer Accessibility: Brought on to explore a possible user ocular ergonomics issue on which no prior work had been done.

- Used **Solidworks** and **Zemax** to explore complex assemblies to better understand the problem and solution space.
- Assessed customer experience through direct use of the viewer system (mocking up various user experiences to try personally and on others), as well as by combing pre-existing user feedback, and interviewing users directly.
- Collaborated with subject-matter experts to rank resulting ideas based on potential user benefit and business risk.
- Specified and procured quick-turn, proof-of-concept optical prototypes of "winning" solution and evaluated them visually and quantitatively by modifying pre-existing viewer calibration fixture.

CAMPUS & TEACHING ACTIVITIES

Rice University

Physical Electronics Laboratory Teaching Assistant & Video Editor

Houston, TX

Jan 2026 – present

Vice President & GSA Liaison of Electrical and Computer Engineering Graduate Student Association

Aug 2025 – Present

Computational Imaging Lab 3D Printing Manager

Feb 2025 – Present

University of Rochester

Rochester, NY

ResLife Office Assistant, Learning Center Tutor, Campus Times Staff Illustrator, & Marching Pep Band Equipment Manager

SKILLS

- Programming: *Advanced* – Python, MATLAB, *Proficient* – Java, C, *Intermediate* – C++
- Optical and mechanical design: KLayout, CODE V, Zemax, IMATEST, LightTools, Autodesk Fusion, Solidworks
- Cleanroom: Profilometry, photolithography, spin coating, reactive ion etching
- Technical experience with optomechanical, interferometry, wavefront sensing, and laser equipment in formal lab settings.