

# ABHIK AHUJA

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## EDUCATION

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### University of Cambridge

October 2023 - June 2024

M.Phil. Computer Science, Advisor: Professor Rafał Mantiuk

Focus: Computer Graphics and Vision

### University of California, Berkeley

August 2019 - May 2023

B.A. Computer Science, Mathematics. GPA: 3.85/4.0

Focus: Computer Vision, 3D Reconstruction, Computational Imaging

### San Joaquin Delta College

August 2015 - May 2019

A.S. Mathematics. GPA: 3.95/4.0

Studied concurrently with high school. Earned 5 Associate degrees.

## RESEARCH EXPERIENCE

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### Berkeley AI Research Lab

July 2022 - September 2023

*Advisors: Professor Angjoo Kanazawa, hew Tancik*

Studying 3D geometry consistent inpainting using latent space diffusion on triplanes. Building text-to-3D generative models using Neural Radiance Fields (NeRF) and 2D Diffusion models for Nerfstudio, an open source NeRF repository with almost four thousand stars on GitHub.

### UC Berkeley SLICE Lab

October 2020 - May 2022

*Advisors: Professor Koushik Sen, Kevin Laeuffer*

Studied automatically repairing bugs in Verilog source code using SMT solvers. Wrote a pass for Berkeley's FIRRTL compiler to automatically repair logical loops in register transfer level (RTL) designs.

### Cornell, Maryland, Max Planck Pre-Doctoral Research School

August 2021

*Saarbrücken, Germany*

One of 120 students worldwide selected to participate in CMMRS 2021, a week long program to expose students to computer science research and life as a researcher. Learned about topics in Deep Learning, Robotics, and Human Computer Interaction.

## INDUSTRY EXPERIENCE

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### Amazon — Software Development Engineer Intern

May 2022 - August 2022

*Seattle, Washington, USA*

Built automatic AWS deployment system in Java and Python to support new feature backend. Designed and wrote custom versioning infrastructure to allow for easier product updates and rollbacks.

### CDK Global — Software Engineering Intern

June 2021 - August 2021

*San Jose, California, USA*

Designed and built new testing infrastructure for software release pipeline. Built React web portal to manage and interactively run testing services on new software releases.

## PUBLICATIONS

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Nerfstudio: A Modular Framework for Neural Radiance Field Development

Matthew Tancik, Ethan Weber, Evonne Ng, Ruilong Li, Brent Yi, Justin Kerr, Terrance Wang, Alexander Kristofferson, Jake Austin, Kamyar Salahi, Abhik Ahuja, David McAllister, Angjoo Kanazawa

ACM SIGGRAPH Submission, 2023.

## TEACHING

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MATH 198: Introduction to Origami Art and Design

Fall 2022, Spring 2023

CS/INFO 198: Digital Privacy

Fall 2021, Fall 2022, Spring 2023

CS 170: Efficient Algorithms and Intractable Problems

Spring 2021

CS 70: Discrete Mathematics and Probability Theory

Summer 2020, Fall 2020

## AWARDS

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2019 - 2023: Honors to Date	UC Berkeley, GPA equivalent to that required for Distinction
2019 - 2023: Shiram Scholars	\$1000 USD/year scholarship program
2019: Graduation with High Honors	San Joaquin Delta College

## RELEVANT COURSEWORK

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- CS 294-173: Learning for 3D Vision
- CS 194-26: Introduction to Computer Vision and Computational Photography
- CS 184: Computer Graphics and Imaging
- CS 182: Deep Neural Networks
- CS 189: Introduction to Machine Learning
- CS 188: Introduction to Artificial Intelligence
- CS 170: Efficient Algorithms and Intractable Problems

## TECHNICAL SKILLS

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- Languages: Python, Java, Scala, C, C++, SQL, Javascript, Golang, OCaml, RISC-V, HTML, CSS, LaTeX
- Libraries and Software: PyTorch, Scikit-learn, SciPy, NumPy, Matplotlib, Linux, Docker, Flask, React

## PROJECTS

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- VRNeRFs: A virtual reality viewer for NVIDIA's Instant-NeRF library.
- Linux System Administration: Self host multiple services for personal use on personally owned Linux server.
- Uni: iOS application to remove tracking parameters from copied and shared URLs.

## LEADERSHIP

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<b>Introduction to Origami Art and Design</b>	2022 - 2023
Co-Founder of the student-led Origami course at UC Berkeley. Created and teaching curriculum on origami folding practice, design principles, and mathematical connections.	
<b>Digital Privacy</b>	2021 - 2023
Co-Founder of the student-led Digital Privacy course at UC Berkeley. Created and teaching curriculum on privacy legislation and individual action surrounding personal privacy.	
<b>CAL Origami</b>	2019 - 2023
President of the origami society at UC Berkeley. Planned and hosted the East Bay Origami Convention in Spring 2023 to support the San Francisco Bay Area origami community.	
<b>UC Berkeley IEEE</b>	2019 - 2020
Marketing Director of IEEE's UC Berkeley student branch. Hosted events with industry leaders and organised engineering workshops for the Berkeley computer science community.	