Abhik Ahuja

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Education

University of California, Berkeley August 2019 - May 2023
B.A. Computer Science / B.A. Mathematics. GPA: 3.88/4.0
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

Berkeley AI Research Lab July 2022 - Present
Advisors: Professor Angjoo Kanazawa, Matthew Tancik
Studying 3D Geometry Consistent Inpainting using ViT Decoders. Building text-to-3D generative models using Neural Radiance Fields and 2D Diffusion models for Nerfstudio, an open source NeRF repository.

UC Berkeley SLICE Lab October 2020 - May 2022
Advisors: Professor Koushik Sen, Kevin Laeufer
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
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

Amazon — Software Development Engineer Intern May 2022 - August 2022
Seattle, Washington, USA
Built automatic AWS deployment system to support new feature backend. Designed and wrote custom versioning infrastructure to allow for easier infrastructure updates and rollbacks.

CDK Global — Software Engineering Intern June 2021 - August 2021
San Jose, California, USA
Designed new testing infrastructure for software release pipeline. Built web portal to manage and interactively run testing services on new software releases.

Publications

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

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

2019 - Present: Honors to Date — UC Berkeley
2019 - 2023: Shiram Scholars — $1000 USD/year scholarship program
2019: Graduation with High Honors — San Joaquin Delta College

Relevant Coursework

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

Technical Skills

- Languages: Python, Java, Scala, C, C++, SQL, Javascript, Golang, OCaml, RISC-V
- Software: PyTorch, SciPy, NumPy, Linux, Docker, Flask, React

Projects

- VRNeRFs: A virtual reality viewer for NVIDIA's Instant-NGP 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

CAL Origami 2019 - Present
President of the origami society at UC Berkeley. Planning and hosting the East Bay Origami Convention in Spring 2023 to support the San Francisco Bay Area origami community.

Introduction to Origami Art and Design 2022 - Present
Co-Founder of the student-led Origami course at UC Berkeley. Created and teaching curriculum on origami folding practice, design principles, and mathematical connections.

Digital Privacy 2021 - Present
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.

UC Berkeley IEEE 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.