

Brian Xu

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Education

- MSc** **Brown University**, Computer Science Sept 2024 – May 2026
- **Coursework:** Seminar in Computer Vision for Graphics and Interaction
- BS** **University of California, Irvine**, Computer Science Sept 2019 – Dec 2022
- GPA: 3.88/4.0
 - **Coursework:** Machine Learning and Data Mining, Introduction to Probabilistic Graphical Models, Introduction to Optimization, Computational Photography and Vision, Project in Computer Vision

Research Experience

- Brown University**, Graduate Student Researcher Sept 2024 – present
- Conducting research on 3D reconstruction methods in low-light environments.

Experience

- Meta Platforms, Inc.**, Software Engineer Intern Burlingame, CA
June 2022 – Sept 2022
3 months
- Improved the speed and scalability of a data annotation pipeline.
 - Increased annotation speed by integrating computer vision models for machine-assisted annotations.
 - Reducing data footprint by over 80% through efficient caching.
 - Redesigned database to better integrate with internal data visualization tools.
- Amazon.com, Inc.**, Graduate Student Researcher Seattle, WA
June 2021 – Sept 2021
3 months
- Created a progressive web app to handle the user registration process.
 - Implemented ML/CV models to process information from user-uploaded images.
 - Designed a robust and scalable backend with the Spring Framework.
 - Created and deployed server endpoints to handle sensitive user information.

Projects

- HyP-NeRF: Learning Improved NeRF Priors using a HyperNetwork** brian-xu/HyP-NeRF [🔗](#)
- Partial implementation of a research paper, building on the author's reference implementation.
 - Original contributions include extending the model to generate NeRF models conditioned on input text and images through usage of CLIP embeddings.
- Inverse Graphics GAN: Learning to Generate 3D Shapes from Unstructured 2D Data** brian-xu/IGGAN [🔗](#)
- Implemented and trained a neural network that learns a distribution of 3D models from 2D images, based on a research paper.
 - Built an efficient data pipeline to enable model training.

Leadership and Membership

Visual Computing @ Brown, Software Engineer Intern

Sept 2024 – present

- Attended NECV2024 @ Yale University

Artificial Intelligence @ UCI, Student Mentor

Mar 2020 – June 2021

- Organized and planned quarterly meetings.
- Designed and taught machine learning workshops to students.
- Led club presentation for university hackathon and judged student projects.

Workshops and Presentations

RenderNet: 3D Voxel Rendering with Deep Convolutional Networks

Apr 2021

- Artificial Intelligence @ UCI

HackUCI - Supervised Learning with Online Datasets

Jan 2021

- HackUCI 2021

PIFuHD: Image-Based 3D Human Shape Estimation

Jan 2021

- Artificial Intelligence @ UCI

Fundamental Machine Learning / Data Science Tools

Nov 2020

- Artificial Intelligence @ UCI

BERT: Bidirectional NLP with Transformers

May 2020

- Artificial Intelligence @ UCI