

# Beide(Zhaoying) Liu

Los Angeles, CA 90024 | 949-317-8969 | beidelu519@gmail.com

## EDUCATION

### University of California, Los Angeles

M.S. IN COMPUTER SCIENCE

Los Angeles, CA | Expected Graduation December 2025

### University of California, Irvine

B.S. IN COMPUTER SCIENCE

Irvine, CA | Graduation Date: March 2023

## TECHNICAL EXPERIENCE

### Student Researcher | Center for Vision, Cognition, Learning, and Autonomy, UCLA

Los Angeles, CA | April 2024 - Present

- Developing the Controllable Video Diffusion model, a generative model enabling user navigation through command inputs in a generated video series.
- Created and integrated Unreal Blueprints and Python scripts to establish TCP ports for remote control via external inputs.
- Automated the simulation of virtual inputs with Python scripts to gather approximately 100GB of training data, significantly enhancing the model's training process.

### Student Researcher | Visual Machines Group, UCLA

Los Angeles, CA | April 2024 - Present

- Implemented DesnowNet, a deep-learning neural network that removes the snow from a given picture.
- Utilized Inception-V4 convolutional neural network architecture to extract descriptors from the images.

### Software Engineering Intern | Remeal Foods

Irvine, CA | June 2023 - September 2023

- Participating in the first iteration of the company's API implementation.
- Developing RESTful backend APIs by using Java to communicate with Postgres Databases to retrieve information.

### Research Intern | Game Learning Society

Irvine, CA | June 2022 - September 2022

- Created an NLP program that helps researchers to correct interview transcripts by using LSTM neural networks.
- Boosted work efficiency by 90%

### Research Assistant | Synthetic Evolution Lab, UC Irvine

Irvine, CA | June 2019 - March 2020

- Designed and prototyped programs that allowed lab researchers to slice different thousands of DNA combinations
- Used python, and rescaled raw experiment data into understandable DNA matrices.
- The work has been published:  
doi: <https://doi.org/10.1101/639120>

### Student Staff | Office of Student Housing, UC Irvine

Irvine, CA | September 2020 - June 2021

### STEM Coordinator | Engineering Student Council, UC Irvine

Irvine, CA | September 2018 - June 2019

## SKILLS

### Technical:

Python • C++ • Java • CSS • HTML • Javascript • MySQL • Postgre • Mongo • Swift • R • Lisp • Scheme • MIPS Assembly • Git/Github • Prolog • Logic • AngularJS • Express

## COURSEWORK

Artificial Intelligence  
Machine Learning/Data Mining  
Data Structures  
Algorithm Design  
Principles of System Design  
Information Retrieval  
Database Management  
Web Development

## PROJECTS

### Pedible

A full stack web applicaiton that allows the users to identify harmful substances in day to day objects by taking snapshots. The object recognition utilizes Google Gemini API, and Computer Vision Models Trained on ImageNet21K.

### Airdrum

Deployed on the web, Airdrum is a full stack project under angular framework. By utilizing a third libiary called handtrack.js, this web application allows the users to play drums based on the different hand gestures.

### Fablix

A full-stack web application for browsing, searching and purchasing movies in a database that is created by parsing through Stanford's movies library. The application runs on Linux VM with Apache Tomcat serving as a REST API. The frontend is written with HTML, CSS, and JavaScript.

### VisArt

Programmed for IOS, VisArt effectively uses ARKit 2, and The Metropolitan Museum of Art Collection API. The user can select/upload artworks that they like and project them onto flat surfaces such as walls through augmented reality.