

# Andy Thai

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**Research Interests:** Computer graphics & animation, image processing, machine learning, vision

## Education

### University of California, Irvine

PH.D. IN COMPUTER SCIENCE, SPECIALIZATION: COMPUTER GRAPHICS

Advisor: Gopi Meenakshisundaram

Irvine, CA

Sep 2018 – Present

### University of California, San Diego

B.S. IN MATHEMATICS-COMPUTER SCIENCE

B.S. IN COGNITIVE SCIENCE WITH SPECIALIZATION IN HUMAN-COMPUTER INTERACTION

La Jolla, CA

Sep 2014 – Jun 2018

## Research Experience

### Interactive Graphics & Visualization Laboratory, UC Irvine

PH.D. STUDENT

Irvine, CA

Sep 2018 – Present

- Led urology processing project to create aesthetic visualizations of volumetric CT scans and utilized deep-learning techniques for semantic segmentation of abdominal organs
- Assisted in geometrically-aware topological cutting algorithms for tori decomposition

### Chiba Neuroscience Laboratory, UC San Diego Department of Cognitive Science

RESEARCH ASSISTANT

La Jolla, CA

Dec 2015 – Sep 2018

- Integrated 3DTracker-FAB, cameras, IMUs, neural recordings with Python OpenCV for 4K res, 30fps, real-time behavior classification
- Developed/maintained ROS C++ modules, Python behavioral code for interactive educational robot, deployed in several classrooms
- Collated data and wrote software tools using Python's OpenCV to assist in analysis for classification of rodent facial expression data
- Managed and supervised undergraduate / high school intern research projects in pro-social rodent behavior and empathy

## Work Experience

### Diverse Educational Community and Doctoral Experience, UC Irvine

DECADE PLUS LEADERSHIP COACH

Irvine, CA

Feb 2019 – present

- Mentors and coaches first-gen under-represented undergraduate students

### Retirement Association, UC San Diego

OFFICE & SUPPLIES MANAGER

La Jolla, CA

Sep 2015 – Jul 2016

- Assisted in user database management, event planning, social media presence, and flyer design
- Reviewed accounting, supply, banking, and financial records for 2150+ association members
- Supervised and trained interns and new hires

### Chancellor's Scholars Alliance, UC San Diego

ACTING CO-PRESIDENT, CO-VICE PRESIDENT, WEBMASTER & COMMUNICATIONS CHAIR

La Jolla, CA

Oct 2014 – Sep 2018

- Oversaw event planning, peer-mentoring systems focused on outreach for 200+ underrepresented first-generation students

## Projects

### Anime Recommender System Analysis

ANDYTH.AI/ANIME-RECOMMENDER

Python

Dec 2017

Exploratory analysis on myanimelist.net dataset, developed collaborative filtering algorithm for recommendations given user histories

### Brain-o-War

ANDYTH.AI/BRAINOWAR

C++, OpenGL, GLSL, NeuroSky

Feb 2017 – Mar 2017

Self-made OpenGL rendering engine with an implemented BCI 3D tug-of-war game that uses player brain waves as control inputs.

## Skills

**Programming:** Python, C++, C, MATLAB, Java, HTML, CSS, Javascript, L<sup>A</sup>T<sub>E</sub>X, Bash shell scripting

**Software Tools:** OpenCV, scikit-learn, Keras, Tensorflow, VTK, Unity, OpenGL, GLSL, Oculus VR, Unix/Linux

**Languages:** English (native speaker), Vietnamese (professional working proficiency)

## Teaching

SU 2019	<b>TA, ICS 33</b> Intermediate Programming in Python
SP 2019	<b>Reader, ICS 45C</b> Programming in C++
WI 2019	<b>TA, ICS 32</b> Programming with Software Libraries
FA 2018	<b>TA, ICS 33</b> Intermediate Programming in Python
WI 2018	<b>TA, COGS 189</b> Brain-Computing Interfaces

## Awards & Honors

Jun 2019	<b>Mentoring Excellence Certificate</b>
Feb 2018	<b>UCI Dean's Award Fellowship</b>
Jul 2017	<b>UCSD Student Foundation Scholarship</b>
2015	<b>Darcy &amp; Robert Bingham Scholarship</b>
Sep 2014	<b>UCSD Chancellor's Scholarship</b>