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Research Interests: Computer graphics & animation, image processing, machine learning, topological geometry

## **Education**

#### University of California, Irvine

Irvine, CA

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

Sep 2018 - Present

Advisor: Gopi Meenakshisundaram

### University of California, San Diego

La Jolla, CA

**B.S. IN MATHEMATICS-COMPUTER SCIENCE** 

Sep 2014 – Jun 2018

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

# Research Experience \_\_\_\_\_

### Interactive Graphics & Visualization Laboratory, UC Irvine

Irvine, CA

Ph.D. Student

GPA: 3.4

Sep 2018 - Present

- Developing novel topological cutting algorithms to segment and decompose complex 3-D meshes for practical manufacturing
- Exploring effects of design choices in CGI synthetic data on semantic segmentation, surface normal estimation, decomposition tasks

### **Chiba Neuroscience Laboratory, UC San Diego**

La Jolla, CA

RESEARCH ASSISTANT

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** \_

### **Retirement Association, UC San Diego**

La Jolla, CA

OFFICE & SUPPLIES MANAGER

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

La Jolla, CA

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

Oct 2014 - Sep 2018

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

# Projects <sub>-</sub>

#### **Anime Recommender System Analysis**

Python Dec 2017

ANDYTH.AI/ANIME-RECOMMENDER

C++, OpenGL, GLSL, NeuroSky

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

#### ANDYTH.AI/BRAINOWAR

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.

## **Project Titanic**

Brain-o-War

C++, OpenGL, GLSL

ANDYTH.AI/PROJECT-TITANIC

May 2017 - Jun 2017

Ship simulation with custom-made engine supporting water, particle FX, SFX, collision detection, and procedural terrain generation

## Skills

Programming: Python, C++, C, MATLAB, Java, HTML, CSS, Javascript, LATEX

Software Tools: OpenGL, GLSL, Oculus VR, OpenCV, scikit-learn, Keras, Unix/Linux, Bash shell scripting

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

## Teaching \_

# \_\_\_\_\_ Awards\_

WI 2019	<b>TA for ICS 32</b> Programming with Software Libraries	Feb 2018	UCI Dean's Award Fellowship
FA 2018	TA for ICS 33 Intermediate Programming in Python	Jul 2017	<b>UCSD Student Foundation Scholarship</b>
WI 2018	TA for COGS 189 Brain-Computing Interfaces	2015	Darcy & Robert Bingham Scholarship
SU 2015	TA for Common Core State Standards	Sep 2014	UCSD Chancellor's Scholarship