

Ruijia Hua

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EDUCATION

University of California, Irvine

Sep 2019 - Jun 2023

- B.S. in Software Engineering | Cum GPA: 3.69/4.0
- Awards: Deans Honor List (Fall 2022, Winter 2022, Spring 2021, Winter 2021)

PUBLICATION

X. Dong, **R. Hua**, "GAN Based Image Inpainting Methods: A Taxonomy," 2022 3rd International Conference on Electronic Communication and Artificial Intelligence (IWECAI), 2022, pp. 145-150, DOI: 10.1109/IWECAI55315.2022.00037.

WORK EXPERIENCES

UCI Sue and Bill Gross Stem Cell Research Center | Web Dev Assistant | Irvine

Jul 2022 - Nov 2022

- Developed and maintained the website for UCI Sue and Bill Gross Stem Cell Research Center using HTML, CSS, and JavaScript
- Installed the Request Tracker, a ticket system to manage requests among users in the entire department
- Created a word extraction algorithm for the request tracker using Regex
- Implemented security features to the website, distinguishing humans from robots to prevent DDoS attacks

Bosch | IT Intern | Wuxi

Jul 2021 - Sep 2021

- Used SQL queries and Python to match and rearrange 5000 employees' departments, status, and other information

RESEARCH EXPERIENCES

Mutation Testing Research Program | Research Assistant | Irvine

Apr 2022 - Nov 2022

- Visualized the tree structure of XML files generated by the mutation testing algorithm using Networkx
- Designed a similarity algorithm using Networkx and the GED similarity measure
- Identified the difference between the structure of the original code effectively and the structure of mutated code, generating a similarity percentage

Machine Learning Research Program | Research Assistant | Remote

Oct 2021 - Jan 2022

- Developed an AI program that generates an image of a person's face when given an image of that person wearing a facial mask, achieving 70% accuracy using Generative Adversarial Networks (GAN)
- Researched the advantages of different image inpainting models such as Pix2Pix GAN and CycleGAN
- Published an academic journal about image inpainting using GAN
- Utilized the machine learning libraries: Scikit-Learn, Pytorch, and TensorFlow

ENGINEERING PROJECTS

Volunteering Management Platform

Sept 2022 - Mar 2023

- Contributed to the development of a volunteer management app "CHODI" for iOS and Android that connects volunteers with local organizations
- Developed the event detail and registration page using Flutter framework

E-commerce Website

Feb 2023

- Created a dynamic E-commerce website using Java Servlet, JavaScript, and GlassFish
- Implemented a SQL database for the website, enabling fast and reliable data storage and retrieval

Gesture Controlled YouTube Video Player

Nov 2022

- Implemented TensorFlow's handtracking algorithm to recognize hand gestures
- Utilized YouTube API and Angular framework to create a webpage for users to control YouTube videos using hand gestures

Sleep Tracker App

Nov 2022

- Developed a mobile app using Ionic Lab and Angular framework to log users' sleep data
- Used local storage to persist the data so that even after reopening the app the data is still there

Gesture Controlled Curtain

Apr 2022 - Jun 2022

- Developed a gesture control algorithm on a Raspberry Pi to recognize hand gestures using the machine-learning framework Mediapipe
- Created a webpage for the product to allow users to control the curtain on their phones
- Designed an API using Flask and Python to allow communication from the webpage

TECHNICAL SKILLS

Python, Java, JavaScript, TypeScript, HTML, CSS, Angular, C++, C, SQL, Lisp, Prolog, Assembly, Figma