

ZEKUN ZHAO

Santa Cruz, CA 95060 • (831) 332-3405 • zzhao99@ucsc.edu
zekunzhao.github.io || www.linkedin.com/in/zekunzhao/

EDUCATION

UNIVERSITY OF CALIFORNIA, SANTA CRUZ

Master of Science in Computer Science

Sep 2018 – Present
GPA: 3.83

UNIVERSITY OF CALIFORNIA, BERKELEY

Exchange Student in the Department of Electrical Engineering and Computer Sciences

Dec 2017 – Jun 2018

NANKAI UNIVERSITY, TIANJIN

Bachelor of Engineering in Intelligent Science and Technology

Sep 2014 – Jun 2018

COURSES

- ♦ Artificial Intelligence ♦ Foundations of Data Science ♦ Machine Learning for Natural Language Processing
- ♦ Advanced Visualization ♦ Computer Graphics ♦ Advanced Topics in Natural Language Processing
- ▶ Teaching Assistant for "Introduction to Analysis of Algorithms" Winter 2020, Spring 2020
- ▶ Teaching Assistant for "Introduction to Data Structures" Fall 2019
- ▶ Teaching Assistant for "Natural Language Processing" Fall 2020

SKILLS

Languages: Python, C++/C, JavaScript

Tools: Keras, OpenCV, ECharts, MySQL, WebGL, SENPY, Robot Operate System, Git

PROJECT

STRUCTURE PREDICTION WITH PYTORCH

Jun 2020 - Present

- Designed an seq2seq training method with the structured perceptron and structured SVM
- Built a Bi-LSTM pytorch model from Scratch to translate between different languages
- Optimized model by avoid generating incoherent text due to repeated words
- Conducted and Integrating Beam and DFS search for better result of translation

WEB APPLICATION FOR HEALTH TRENDS

Jan 2019 – Jun 2019

- Built web application to render content with responsive web design in jQuery, HTML and CSS
- Implemented a data pipeline with Python and MySQL to monitor and store text data from human health field
- Developed filter by NLP framework SENPY to filter noise and irrelevant data
- Designed and built an offline training pipeline with Keras, TensorFlow, CNN and NLP for topic prediction
- Created system status monitor panel with ECharts for data structure visualization and analysis

COMPUTER GRAPHICS: WEB 3D FACE ANIMATION IN REAL-TIME

Sep 2018 - Dec 2018

- Designed and developed a web application that retrieves historical and real-time image data from web camera using HTML, CSS and JavaScript and track face features in details using BRF4v package library
- Implemented Matrix transformer function for matching corresponding face emotion between camera face and 3D face
- Developed Rendered interactive 3D face graphics in web browser using WebGL and HTML canvas element
- Constructed the user page for loading static image and self-control animation

ROBOT VISION AND PERSON/GENDER/OBJECT RECOGNITION SYSTEM

Jun 2016 - May 2017

- Developed a new approach based on skin, spatial and sequence info to detect waving hands (accuracy of 86% in real environment, 40% contribution for final score). Project Website: <http://openbotics.org/kamerider>
- Adopted hand crafted feature and AdaBoost learning algorithm to identify human face, accuracy of 96%
- Detected salient regions from camera using saliency method with Shape context to perform object recognition
- Implemented a logic layer to communicate with backend data obtained via multiple source from Robot System