ZEKUN ZHAO

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EDUCATION

UNIVERSITY OF CALIFORNIA, SANTA CRUZ Sep 2018 – Present
Master of Science in Computer Science GPA: 3.83

UNIVERSITY OF CALIFORNIA, BERKELEY Dec 2017 – Jun 2018
Exchange Student in the Department of Electrical Engineering and Computer Sciences

NANKAI UNIVERSITY, TIANJIN Sep 2014 – Jun 2018
Bachelor of Engineering in Intelligent Science and Technology

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" Spring 2020
- Teaching Assistant for "Introduction to Analysis of Algorithms" Winter 2020
- Teaching Assistant for "Introduction to Data Structures" Fall 2019

SKILLS

Languages: Python, C++/C, JavaScript
Tools: Keras, OpenCV, ECharts, MySQL, WebGL, SENPY, Robot Operate System, Git

PROJECT

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

MACHINE LEARNING: PET ADOPTION RATE PREDICTION Jan 2019 - Mar 2019

- Designed an offline training method Bayesian network to train prediction model for labels
- Built a multi-class classifier to predict pet adoption rate using Keras and obtained accuracy of 92%
- Optimized model by integrating images and text labels for better result of classification
- Conducted K-means cluster based on features in the neuron network hidden layer to recover 5 classes

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 hand (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