

WANG, Chongyu

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EDUCATION

Zhejiang University (ZJU)

Sept. 2018 – Jul. 2022

Electronics and Computer Engineering—Bachelor of Engineering

Curriculum GPA: 3.79/4.00

University of Illinois at Urbana-Champaign (UIUC)

Sept. 2018 – Jul. 2022

Computer Engineering—Bachelor of Science

Curriculum GPA: 3.74/4.00

PUBLICATION

Tianyu Liu, Junyu Chang, Chongyu Wang, Liangjing Yang, *Specular Reflections Detection and Removal Based on Deep Neural Network for Endoscope Images*, accepted by 2021 43rd Annual International Conference of the IEEE Engineering in Medicine & Biology Society (EMBC). doi: <https://doi.org/10.36227/techrxiv.16918234>. (Poster)

RESEARCH EXPERIENCE

Specular Reflections Detection and Removal Based on Deep Neural Network for Endoscope Images

Instructor: Prof. Liangjing Yang

Mar. 2020 – Jul. 2021

- Aimed to detect and restore specular reflections caused by metal instruments or smooth tissue membrane during surgical operations based on Deep Neural Network.
- Proposed a novel model based on the deep learning framework, known as Surgical Fix Deep Neural Network (SFDNN), to detect the reflection points in a surgical video.
- Used the time series scheme to repair the reflection part, restoring the real surgical scene.
- A paper of this work has been accepted by IEEE EMBC 2021.

Knowledge Extraction and Retrieval of Diesel Engine Event Report in Nuclear Power Plant Based on Natural Language Processing

Mar. 2020 – present

Project leader of this National Student Research Training Program, Instructor: Prof. Hongwei Wang

- Built a nuclear corpus based on the diesel-related event reports provided by Qinshan Nuclear Power Station.
- Proposed a novel statistics-based key-phrase extraction model, which performed well on Chinese documents such as diesel-related event reports.
- Plan to implement the entity and relation extraction based on event reports and build a search engine system for event reports based on extracted knowledge.

COURSE EXPERIENCE

Teaching Assistant

Sept. 2021 – present

Teaching Assistant in Computer Systems & Programming Course

- Working with Prof. Pavel Loskot and Prof. Steve Lumetta

Bomberman Game Based on FPGA

Aug. 2020 – Jan. 2021

Digital Systems Laboratory Course Final Project, Instructor: Prof. Chushan Li

- Used Intel FPGA development board and Quartus to develop Bomberman, a two-player online game.
- The main logic of the game and interfaces was written by SystemVerilog. The main logic was implemented by state machine, and interfaces included voice interface, wireless remote-control interface, keyboard interface.

The Basic Implementation of Operating System based on x86 architecture

Jan. 2021 – May. 2021

Computer Systems Engineering Course Final Project, Instructor: Prof. Steven S. Lumetta

- Implemented the real-time clock (RTC) and its virtualization, created a terminal driver to handle the keyboard input, wrapped System Call, allocated memory and implemented paging, including initialization of paging and mapping the virtual and physical address during scheduling.

HONORS & AWARDS

Second Prize of the 11th Chinese Mathematics Competitions

Dec. 2019