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 National 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*