JIANCHANG SU

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EDUCATION

FAU Erlangen-Nürnberg, Germany *Apr. 2021 - Mar. 2023(Expected)*
M.S. in Artificial Intelligence

Shanghai Normal University, China *Sep. 2016 - Jun. 2020*
B.E. in Electronic Information Engineering

RESEARCH INTEREST

My research aims to improve **scalability** and **efficiency** of computer systems with a focus on **Cloud Computing**, **High Performance Architecture**, and **Machine Learning Systems**.

SELECTED PROJECTS

Deep Learning based Jewish Gravestone Digitization Apr. 2022 - Oct. 2022

- Collected and built a dataset for Jewish tombstone Hebrew text detection and recognition with the goal of Jewish cultural relics reservation.
- Proposed a new method that combined U-Net and YOLO with text detection and recognition accuracy of improvement.

Neural Network Inference Acceleration with TVM Mar. 2022 - Jul. 2022

- Benchmarked deep learning compiler TVM kernel-level tuning, graph-level tuning, and cost-model optimization.
- Measured the optimization results of the TensorRT deployment at different precision and achieved a 3.3% optimization enhancement for the cost-model with ResNet101 compared to TensorRT.

Accelerating Neural Network Inference on Nvidia GPU Oct. 2021 - Apr. 2022

- Implemented multiple acceleration methods in GEMM, convolution, and neural network inference via CUDA; reached theoretical GPU performance with optimized GEMM.
- Utilized TensoRT and Pytorch to realize quantization and pruned model for acceleration, which improved inference performance by 72% while lowered the inference accuracy by only 2.2%.

WORK EXPERIENCE

FAU Erlangen-Nürnberg Jan. 2022 - Present
Student Assistant *Erlangen, Germany*

- Developed a system for coat of arms segmentation based on PyTorch and TensorRT.
- Implemented end-to-end segmentation and accelerated 62% in inference time.

Shanghai Science and Technology Innovation Resources Center Oct. 2019 - Jan. 2020
Software Development Engineer Intern *Shanghai, China*

- Developed a learning-enabled solution to address New Word Discovery task and demonstrated an accuracy of 94% on the given dataset and model.
- Implemented a graph-based system for early talent scholars acquisition, which was successfully utilized in locating and enrolling three scholars in different fields.

Shanghai Shuli Intelligent Technology Co., Ltd. Jul. 2017 - Oct. 2017
Software Testing Intern *Shanghai, China*

- Designed and executed automated software test plans, cases, and scripts to uncover, identify and document software bugs and causes.
- Introduced Quality Assurance testing into the software development cycle to initiate a test-driven development process, boosting code quality, software functionality, and developer productivity.

RESEARCH EXPERIENCE

Vision Computing Laboratory, Shanghai Normal University Aug. 2017 - Oct. 2019
Undergraduate Research Assistant *Shanghai, China*

- Proposed a new image segmentation algorithm to integrate K-Means and SLIC for the over-segmentation problem, improving the segmentation accuracy by 21.5%.
- Designed new loss function for road scene image segmentation and enhanced the segmentation accuracy regarding small objects by 12.5%.

PUBLICATION

J. Su and Y. Ma, "Image segmentation algorithm based on superpixel and K-means" *Computer Era*, no. 2, pp. 58-60,66, 2019.

HONORS AND AWARDS

The Second Prize Scholarship 2019

TECHNICAL SKILLS

Languages:	Native in Chinese, Fluent in English
Programming Languages:	C/C++, Python, Coq
Technologies:	Git, Latex, CMake, Slurm