

Zishu LIU

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🎓 Education

Tsinghua University

Beijing, China

Department of Engineering Physics

Aug 2016 – Present

- Bachelor in **Engineering Physics**; GPA:3.46/4 (Top 10%); Major GPA: 3.55/4
 - Core courses: Decision Making of Public Safety (A+)
 - Methods of Mathematics and Physics (A-)
- Minor in **Computer Technology and Application**; GPA: 3.39/4
 - Core courses: Principal and Application of Database (A)
 - Discrete Mathematics in Computer Science A (B+)

🔬 Research Experience

Construction and Similarity Calculation of Emergency

Beijing, China

Student Research Training | Research Assistant

May 2017 – Sept 2018

Advisor: Yi Liu, Associate Professor, Department of Engineering Physics, Tsinghua University

- Constructed emergency and calculated its similarity with the combination of the view of ‘Scene’ and the method of Markov chain, evaluated it on real-world oil tank fire
- Implemented the construction on an emergency-library application and designed its user interface

Detection of the Plasma Boundary in Tokamak

Beijing, China

Homework Project 🌐 zs-liu/Sunist

Nov 2018 – Jan 2019

- Labeled plasma boundary on origin images and processed images with *OpenCV*
- Used *PyTorch* to set up FCN(fully-convolutional-network) and trained with labeled images
- Reached about 90% training accuracy and got acceptable result on video

Smart Community Platform

Beijing, China

Student Research Training | Research Assistant

Oct 2018 – Present

Advisor: Yi Liu, Associate Professor, Department of Engineering Physics, Tsinghua University

- The project aims at developing a cloud-platform of community to simulate and monitor emergency
- Used *ContextCapture* and *Revit* to model the result of oblique photography
- Developing the 3D visualization part of the platform based on *Cesium*

⚙️ Skills

Programming Languages: C/C++, Fortran, Java, Python, Wolfram

Experienced in MySQL, Pytorch, OpenCV, Mathematica and other programming tools

🏆 Honors and Awards

School-Provided Scholarship (Study Scholarship)

Oct 2017

The 12th Tsinghua University Smart Car Competition, Third prize (6 out of 20 groups)

Dec 2017

Friend of Tsinghua – Li Canjie Scholarship (Study Scholarship) (1 out of 160 students)

Oct 2018

📖 Publication

- [1] C. Liu, **Z. Liu**, S. Yu, and Y. Liu. Research and design of case analysis cloud platform based on multidimensional scenario model. In *China Association for Public Safety*, 2018.