



# Zhuang Kang



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ZhuangKang



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## About me

Guten Tag! I'm Zhuang Kang, a final-stage Master's student in Mathematics at the University of Münster. I specialize in mathematical image processing, optimization, and machine learning. Currently, I'm actively seeking industrial internship positions and thesis opportunities. Excited about contributing to practical innovations, I bring a strong foundation in mathematics and hands-on experience.

## Education

### Universität Münster

M. Sc. Mathematics

Münster

10/2021 - 09/2024

### Sichuan University

B. Sc. Mathematics

Chengdu

09/2017 - 06/2021

## Lectures

Lie groups 1,7

Machine Learning

Numerical optimization 1,0

Deep Neural Networks with PyTorch

Building Deep learning Models with TensorFlow

Advanced Numerical Methods and Applications 1,0

Mathematical Image Processing and Inverse Problems

Introduction to Computer Vision and Image Processing

## Research projects

### Blood Cell Cancer recognition with ResNet50 ♦Website

12/2023-01/2024

Preprocessed the dataset consists of 3000+ images, including cropping, clustering and segmentation.

Applied ResNet50 to image classification tasks, achieved 99% accuracy.

### Computed Tomography and Bregman method ♦Website

06/2023-12/2023

Applied Bregman iteration to address image restoration problem, including image denosing, CT reconstruction.

Summarized the development of iterative method in Computed Tomography.

### Manifold optimization and image segmentation ♦Website

04/2022-01/2023

Applied Manifold optimization theory to enhance the Active Contour model for image segmentation.

Explored the completeness of the space of all closed curves.

## Technical strength

### Computer skills

Junior: Python, Tensorflow, openCV, Skimage, Pandas, Git, Docker, Google colab

Intermediate: Matlab, C++ **Languages skills**

Chinese(native), English(Fluent)

## Honors and scholarships

### Full-Grant scholarship of WWU Münster

10/2021-09/2023

The 2 year scholarship is awarded to exceptionally talented students selected by the Masters Admission Committee. 3 students were selected from 24 applicants.

## Student service

### Tutor of Numerical Optimization

04/2023-09/2023

Conducted exercise courses.

Reviewed and corrected exercise sheets and Python codes.

### President of SCU Association Union

09/2019-08/2020

Manager of 12 associations in SCU Mathematical institute, responsible for their activity approval, financial management and year-end review.