

LUO HAOZHE

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SUMMARY

- Artificial Intelligence master candidate University of Zurich
- GPA: 3.83/4.0 (90.08/100) Sichuan University (Bachelor)
- Language score: IELTS 7
- Interdisciplinary undergraduate with skills in machine learning, cognitive neuroscience, and Algorithmic intelligence
- Self-motivated, problem-solving, and collaborative undergraduate with excellent communication skills

TECHNICAL SKILLS

- **Data Science:** Data cleaning, Data processing, Data analysis
- **Computer Vision and NLP:** Image segmentation, Target detection, Image classification, Self-supervised Learning, NAS, NLP
- **Programming languages:** C++, Python, R

RESEARCH EXPERIENCE

- **Student Research Assistant, Supervised by Prof. Bjoern Menze (University Hospital Zurich)** August 2023 - Present
 - Multi-modal pretraining and zero-shot inference.
 - Domain Adaptation.
- **Online Visiting Scholar, Supervised by Prof. Jianming Liang (Arizona State University)** February 2022 - Present
 - Exploring Anatomical Consistency-Based Pretraining
 - Designing stable and effective self-supervised algorithms for downstream tasks.
 - Assistance with large-scale benchmark training
- **Summer Research Internship, Supervised by Prof. Raghavendra Selvan (University of Copenhagen)** June 2021 - January 2022
 - Using learnable attentional feature vectors as global supervised information.
 - Overcoming the problem that pure visual transformer is difficult to train on small-scale datasets.
- **Research Leader, Supervised by Prof. Hu Long and Prof. Wanzhong Song** December 2019 - June 2020
 - Pixel-level labeling of tooth roots in collaboration with doctors.
 - Designing progressive segmentation for accurate tooth structure (including root of tooth) segmentation using a large number of coarsely labeled samples and a small number of fine-grained labeled samples
- **Research Member, Supervised by Prof. Wen Liao and Prof. Wanzhong Song** October 2020 - May 2021
 - Requested and collected Orthopantomogram images of more than a thousand patients.
 - In order to solve the problem that the traditional target detection + classification all-in-one approach is ineffective.
- **Research Member, Collaborated with Dr. Changdong Yu (Harbin Engineering University)** March 2021 - June 2021
 - Propose an ultra-lightweight semantic segmentation network.
 - The convolutional cascade network is constructed.
- **Research Assistant, Supervised by Dr. Charles Li (Stanford University) and Dr. Chen Wang (UCLA, IBM)** January 2021 - September 2021
 - Reviewing the history of human-computer interaction systems.
 - Read and summarize a large number of articles in related fields.

PUBLICATIONS

- [One work related to Structured Medical Imaging Pre-training is ready to be submitted to CVPR2024](#)
- [21/08/2023, Learning Anatomically Consistent Embedding for Chest Radiography \(Accepted to be presented at 34th British Machine Vision Conference, BMVC2023, as oral\)](#)
- [28/02/2022, Hybrid Ladder Transformers with Efficient Parallel-Cross Attention for Medical Image Segmentation \(Accepted to be presented at the 5th International Conference on Medical Imaging with Deep Learning, MIDL2022\)](#)
- [16/11/2021, A Cascaded Convolutional Neural Network for Two-phase Flow PIV of An Object Entering Water, IEEE Transactions on Instrumentation and Measurement](#)
- [01/10/2021, An Effective Convolutional Neural Network for Liquid Phase Extraction in Two-Phase Flow Piv Experiment of An Object Entering Water, Ocean Engineering](#)
- [17/05/2021, Machine Learning in Dental, Oral and Craniofacial Imaging: a Review Of Recent Progress, PeerJ](#)
- Patent: Dental Body detection model, generation method, and dental body segmentation method

- Software Copyright: Deep learning-based automatic root resorption localization and grading system

EDUCATION

- Master Candidate, Artificial Intelligence, University of Zurich 2022 - Present
- Bachelor, Computer Science And Technology, Sichuan University (985 project) 2018 - 2022

WORK EXPERIENCE

- Position: Artificial Intelligence Algorithm Intern November 2021 - April 2022
- Company: SenseTime; 18th floor, building B6, zone D, Tianfu Jingrong Center, No.99 West Hupan Road, Tianfu New District, Chengdu; <https://www.sensetime.com/>
- Work content: Research of Neural Architecture Search (focus on Transformer architecture), AutoML

AWARDS

- 02/2022, Outstanding graduate of Sichuan University
- 13/09/2021, 2021 College Students' Innovative Entrepreneurial Training Plan Program National level Awards, Ministry of Education of the People's Republic of China
- 12/11/2021, 2021 College Students' Innovative Entrepreneurial Training Plan Program Provincial level Awards, Ministry of Education of the People's Republic of China
- 15/11/2020, 2020 College Students' Innovative Entrepreneurial Training Plan Program Provincial level, Ministry of Education of the People's Republic of China
- 10/09/2021, Individual first-class Scholarship for 2020, Sichuan University
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- 15/10/2019, Third prize of 2019 Contemporary Undergraduate Mathematical Contest in Modeling (CUMCM) in Sichuan Province, China Society for Industrial and Applied Mathematics
- 10/10/2018, Student of Wu Yuzhang Honors College, Sichuan University, Sichuan University

MEMBERSHIPS

- 10/03/2020, Founding member and technical backbone of Geek Club, Sichuan University
- 10/09/2018, Committee member of Department of Science, Technology and Culture, Sichuan University

OTHER SKILLS

Languages English: skilled. Chinese: native. German: conversational.

Musical instrument Piano, ukulele.