

Yinda Chen

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EDUCATION

University of Science and Technology of China <i>Ph.D. in Information and Communication Engineering</i>	Hefei, China 2024 – 2027
University of Science and Technology of China <i>Master of Computer Science and Technology</i>	Hefei, China 2022 – 2025
Xiamen University <i>Bachelor of Environmental Science & Engineering and Economics (double degree)</i>	Xiamen, China 2018 – 2022

EXPERIENCE

Research Intern <i>301 Hospital (People's Liberation Army General Hospital)</i> <ul style="list-style-type: none">Collaborated with Academician Qionghai Dai's team on efficient data compression research and submitted a paper to NeurIPS.	September 2023 – February 2024 Beijing, China
Research Intern <i>Imperial College London (remote)</i> <ul style="list-style-type: none">Collaborated with Prof. Rossella Arcucci on multimodal pretraining research and submitted a paper to JBHI.	November 2022 – August 2023 London, UK
Research Assistant <i>The Wang Yanan Institute for Studies in Economics (WISE)</i> <ul style="list-style-type: none">Assisted Associate Professor Jiong Zhu in conducting research on spatial economics, mainly responsible for using ArcGIS to extract geographical location information.	December 2021 – July 2022 Xiamen, China
Research Assistant <i>South China Botanical Garden, Chinese Academy of Sciences (CAS)</i> <ul style="list-style-type: none">Assisted researcher Zhanfeng Liu in conducting research related to soil and climate, and won the first prize for the research report.	August 2019 – August 2020 Guangzhou, China

PROJECTS

Large-Scale Self-Supervised Pretraining <ul style="list-style-type: none">Self-supervised neuron segmentation with multi-agent reinforcement learning, IJCAI 23Improved MAE masking strategy based on reinforcement learning methods, automatically selecting masking rate and masking scheme.Learning multiscale consistency for self-supervised electron microscopy instance segmentation, ICASSP 24Achieved high-performance pretraining strategy based on multiscale feature contrast learning and feature reconstruction.Generative Text-Guided 3D Vision-Language Pretraining for Unified Medical Image Segmentation, Submit to JBHIConducted multimodal image-text contrast learning pretraining based on large language model-generated image descriptions.Generative Text-Guided 3D Vision-Language Pretraining for Unified Medical Image Segmentation, Submit to NeurIPS 24Proposed pretraining method combining image autoregression and mamba framework, demonstrating advantages in long sequences and low computational cost, showcasing good scaling laws, and providing corresponding theoretical proof.	May 2022 – December 2023
Large-Scale Data Compression and Information Retrieval <ul style="list-style-type: none">UniCompress: Enhancing Multi-Data Medical Image Compression with Knowledge Distillation, Submit to NeurIPS 24Achieved higher compression performance through multimodal knowledge priors and implicit neural network compression of multiple data, based on knowledge distillation.	August 2023 – Present

- **BIMCV-R: A Landmark Dataset for 3D CT Text-Image Retrieval, MICCAI 24**
- Constructed the first open-source 3D CT image-text pair and implemented efficient image-text information retrieval and keyword search.

Large Model Pretraining

September 2023 – Present

- **Image Encoding, Intra-frame Prediction Large Model**
- Primarily responsible for pretraining within the team, experienced in large-scale cluster pretraining with 64 A40s, proficient in DDP, DeepSpeed, Colossal-AI and other large model frameworks.
- **Medical Image Segmentation, Neuron Segmentation Large Model**
- Developed advanced segmentation models for diverse medical imaging applications, focusing on neuron segmentation.

HONORS AND AWARDS

- American Mathematical Contest in Modeling, O Award, INFORMS Named Award (individually completed). **May 2024**
- Graduate National Scholarship, Top 1%. **December 2022**
- Xiamen University Academic Star, Only Undergraduate Winner. **December 2021**
- “Jingrun Cup” Mathematics Competition Professional Group, First Place at Xiamen University. **September 2021**
- “Internet+” Contest, Gold Medal in Fujian Province. **August 2021**
- National Undergraduate Mathematics Competition Non-Professional Group Final, National Second Prize. **May 2021**
- “Challenge Cup” National Undergraduate Extracurricular Academic Science and Technology Works Competition, First Prize in Fujian Province. **May 2021**
- National Undergraduate Mathematics Competition Non-Professional Group, First Place in Fujian Province. **November 2020**

TECHNICAL SKILLS

Programming Languages: Python, MATLAB, L^AT_EX, C, C++, Java

Frameworks: TensorFlow, PyTorch, FastAPI, Flask

Developer Tools: Git, Docker, DDP, DeepSpeed, Colossal-AI

Cloud Platforms: Google Cloud Platform, AWS

Language Proficiency: TOEFL (110), GRE (328)