

YIZHOU CHEN

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EDUCATION

Master of Mechanical Engineering, Shanghai Jiao Tong University, China *Sep 2021 - Mar 2024 Expected*
Graduate student in Institute of Biomedical Manufacturing and Life Quality Engineering
Cumulative GPA: 3.82/4.0

Engineer's Degree in Informatics, CentraleSupélec, France *Sep 2019 - Jun 2021*
Double Degree Program, Cumulative GPA: 4.0/4.3
Relevant Coursework: Statistics, Machine Learning, Cloud Computing, Control Theory, Signal Processing

Bachelor of Mechanical Engineering, Shanghai Jiao Tong University, China *Sep 2017 - Jun 2019*
Relevant Coursework: Software Engineering, ROS For Beginners, Embedded Deep Learning

RESEARCH INTERESTS

Image Segmentation and Reconstruction, 3D Shape Analysis, Large Language Models

SKILLS

Programming Languages	Experienced: Python; Familiar: Matlab, C++
Frameworks & Libraries	TensorFlow, PyTorch, VTK, Docker, Ray
Languages	Native: Chinese; Fluent: English (IELTS 7.5), French

PROJECTS

Tooth Shape Analysis *Smartee Tech. Ltd. - Shanghai Jiao Tong University, Dec 2021 - Aug 2023*
Tooth semantic segmentation of intra-oral photos, reconstruction of 3D teeth model from single or multiple intra-oral photos (2D-to-3D multi-object reconstruction based on statistical shape modeling, <https://github.com/SJTUzhou/3D-Teeth-Reconstruction-from-Five-Intra-oral-Images>), and prediction of smiles with aligned teeth after orthodontic treatment through generative adversarial neural networks.

Research on the Robustness of GNN *CentraleSupélec, Feb 2021 - Jun 2021*
Enhance the robustness of graph neural network (GNN) against adversarial attacks by restricting the upper-bound of Lipschitz constant of the weights in GNN model. (https://github.com/SJTUzhou/Lipschitz_gnn)

Rating Prediction Based on Matrix Factorization *CentraleSupélec, Jan 2020 - Jun 2020*
Implementation of a matrix decomposition algorithm in the context of the Netflix Prize and analysis of the performance of stochastic gradient descent and alternating least squares in matrix decomposition optimization. (<https://github.com/SJTUzhou/NetflixPrizeMatrixFactorization>)

AI Chatbot Application *Shanghai Jiao Tong University, Feb 2019 - Jun 2019*
Course project of software engineering. Responsible for the development of the Chatbot Android App with iFLYTEK speech recognition API and the deployment of the trained deep learning model on GPU server, which can generate picture descriptions and mimic real-life conversations. (<https://github.com/qtw1998/Chat-Robot>)

INTERNSHIPS

Research Intern on Large Language Models *Shanghai Qi Zhi Institute, Apr 2023 - Present*
Data cleaning and processing, research on parallel and distributed deep learning, and training and deployment of large language models (i.e. OpenLLaMA) on the GPU cluster through DeepSpeed, Ray, and Kubernetes.

PUBLICATIONS

- **Yizhou Chen**, Shuojie Gao, Puxun Tu, and Xiaojun Chen, “Automatic 3D Teeth Reconstruction from Five Intra-oral Photos Using Parametric Teeth Model”, *IEEE Transactions on Visualization and Computer Graphics*, May 2023, DOI: 10.1109/TVCG.2023.3277914.
- **Yizhou Chen** and Xiaojun Chen, “A Semantic-guided and Knowledge-based Generative Framework for Orthodontic Visual Outcome Preview”, *Medical Image Computing and Computer Assisted Intervention–MICCAI 2023: 26th International Conference*, 2023, Early Accept.

COMPETITION AWARDS

- Second Prize of the 18th China Postgraduate Mathematical Contest in Modeling *Dec 2021*
Contest Problem: Airline crew scheduling
- Second Place of Huawei European University Challenge 2021 *Jun 2021*
Contest Problem: Fiber failure prediction
- Meritorious Winner of Interdisciplinary Contest In Modeling 2021 *Feb 2021*
Problem Title: The Influence of Music