RAO FU
Email: **raofu@usc.edu**
Mobile No.: **626-228-5129**
WeChat.: **976642018**

EDUCATION

- **UNIVERSITY OF CHINESE ACADEMY OF SCIENCES** *Sept. 2017-Present*
  Bachelor of Computer Science and Technology
    - GPA: 3.72/4.00
    - Skills: C/C++/Python/Tensorflow/Matlab/Latex/Maya/VHDL
    - English: TOFEL 108, GRE 330(160/V+170/Q+3.0/AW)
    - Selected Courses: Discrete Mathematics, Probability and Mathematical Statistics, Data Structure, Introduction to Theory of Computation, Artificial Intelligence, Machine Learning, Computer Graphics

- **UNIVERSITY OF SOUTHERN CALIFORNIA** *Jan. 2020-May. 2020*
  Visiting Student
    - Selected Courses: Introduction to Algorithm and Theory of Computing, Web Publishing, 3D Modeling Animation and Visual Effect

- **UNIVERSITY OF CALIFORNIA SAN DIEGO** *May. 2020-Sept. 2020*
  Prof. Hao Su's Visiting Scholar

PUBLICATION

- **Rao Fu**, Jiawei Sun, Jie Yang, Lin Gao. *RimdVAE: Rotation-invariant 3D Shape Retrieval Network*
  Ready to submit to *IEEE Transactions on Visualization Computer Graphics***(TVCG)**

RESEARCH EXPERIENCES

- **Research on 3D Shape Retrieval** *Sept.2019-present*
  Advisor:Prof. Lin Gao *Institute of Computing Technology, Chinese Academy Of Sciences*
    - Established a model for rotation-invariant intra-class 3D shape retrieval tasks
    - Construct a dataset for intra-class 3D shape retrieval, which is ready to release
    - Implement the neural network with Python, Tensorflow and Matlab
    - Complete a paper to be submitted to international journal as first author

- **Research on Single Image Reconstruction** *Jul.2019-Sept.2019*
  Advisor:Prof. Lin Gao *Institute of Computing Technology, Chinese Academy Of Sciences*
    - Objection: Reconstruct an outdoor scene from a single image
    - Basic theory study(include image segmentation, terrain modelling, tree modelling and outdoor scene reconstruction)
    - Brought up idea to reconstruct tree model from a set of parameterized 3D vector fields

- **Research on Precise Identification of Chromatin Interaction Sites** *Jul.2018-Sept.2018*
  Advisor:Prof. Zhihua Zhang *Beijing Institute of Genomics, Chinese Academy Of Sciences*
    - Objection: Present an algorithm for precise identification of chromatin interaction sites at kilobase resolution
    - Look through literature reviews about genome-wide mapping and analysis of chromosome architecture

PROJECTS AND COMPETITIONS

- **OCR-based ID Card Entities Extraction, CCF Big Data Computing Intelligence Contest** *Oct. 2019*
    - Objection: Extract entities from blurred and randomly rotated ID Card images
    - Ranking: 47/1933

- **Triplet Matching, Course Project** *Autumn 2019*
    - Objection: Given a sentence and entities in that sentence, extract all correct triples
    - Use Transformer model to boost model's ability
    - Implemented the word embedding encoder and transformer model with Tensorflow

- **OpenGL Workshop, Course Project** *Autumn 2019*

- Objection: Learn the basic algorithms of computer graphics and implement them with OpenGL
  - Implement Bezier Curve and Bezier surface with C and C++
  - Phong Lighting Model and Ray-Tracing Algorithm with Python

- **Go-Bang Game in C language, Course Project**   *Autumn 2018*
  - Objection: Design an Go-Bang game with interactive interface and chess-playing strategy
  - Designed game interface and implemented Human-vs-Human mode and Human-vs-Machine mode with C
  - Optimized the chess playing strategy with α-β pruning algorithm