WEI Lan

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EDUCATION BACKGROUND

University of Science and Technology of China **09/2021-Present**

- Major: Master of Engineering in Computer Science and Technology
- Core Modules: Combinatorial Mathematics, Algorithm Design and Analysis, Graph Theory, Advanced Artificial Intelligence, Advanced Software Engineering, Advanced Quantum Computing

Xiamen University **09/2017-06/2021**

- Major: Bachelor of Engineering in Computer Science and Technology (Honours)
- GPA: 3.87/4 (Top 3%, Ranking: 2/80)

RESEARCH EXPERIENCE

Research Assistant, Physics-informed GNN for Computer Graphics, AIoT Lab **09/2022-03/2023**

- Submit a paper - Multi-scale Graph Neural Network for Physics-informed Fluid Simulation in Computer Graphics International (**CCF C**) as the first author.
- Model fluid flow via GNN at different scales in succinct consideration of scalability and physical constraints.
- Achieve the SOTA in both one-step and long trajectory fluid simulation with the lowest model inference time.

Research Assistant, Volume Prediction of Ellipsoidal Ham, CACV Lab **11/2018-09/2020**

- Published an article-A Statistical Approach in Enhancing the Volume Prediction of Ellipsoidal Ham in Journal of Food Engineering (**SCI Q1**, Impact Factor: 3.625, Ranking 28/138) as the second author
- Applied Mask-RCNN to process images of the research object, analyzed the value of major axis, minor axis, extreme points and object orientation of ellipsoidal ham with MATLAB boxplot and got the position of irregular images
- Worked out the actual volume of the object with its pixel value using the conversion rate after adjusting irregular images
- Applied quadratic polynomial and power function build to conversion rate model of the results
- Acquired four parameters of the model using LOOO

INTERNSHIP

Research and Algorithm Department Intern, Xiamen Manteia Data Technology Co., Ltd. **09/2020-03/2021**

- Published an article-Boundary-aware Transformers for Skin Lesion Segmentation in MICCAI conference as the first author.
- Proposed a novel network architecture that integrate a new boundary-wise attention gate (BAG) into transformer architecture to enable the whole network to not only effectively model global long-range dependencies via transformers but also, simultaneously, capture more local details by making full use of boundary-wise prior knowledge.

Financial Data Analyst, Huawei Technology Co., Ltd., Chengdu Research Institute **07/2019-10/2019**

- Conducted visual analysis of financial data using MATLAB and Power BI, and built dynamic mathematical model
- Calculated the proportion of total annual expense in overall budget, compared monthly and quarterly expense with the budget, did parallel comparison of spending for various modules, made prediction about future cost and gave warnings based on performance of the current year
- Hosted Commendation Conference of Suppliers for the first half of 2019

PROJECT EXPERIENCE

Tencent Game 2022 Engine & Graphics Research Project **01/09/2022-30/12/2022**

- This is a three-month research program to optimize UE4 for mobile device rendering.
- Realized a high realistic complex lighting scene simulation under dynamic weather scene on mobile based on UE4.

2020 Next Exceptional X Talent Program **01/07/2020-29/08/2020**

- The program is a 60-day intensive summer boot camp with a collection of Googler coaching sessions and online training
- Attended training sessions in computer algorithm, programming, software development, leadership training

11th China Adolescents Science and Technology Innovation Contest(The Application Innovation of BeiDou under the Background of "One Belt and One Road" — Malaysian Map Application Design Based on BeiDou) **02/2020-10/2020**

- The project designs a Malaysian map application based on BDS
- Include key modules (positioning module, traffic situation detection module, route planning module, SOS emergency call module, AR mini game module, footstep heat map module, 3D view preview, forum module)
- Won the first prize in the final national final

HONORS AND AWARDS

- First-class Scholarship, University of Science and Technology of China 09/2022
- First-class Scholarship, University of Science and Technology of China 09/2021
- First-class Scholarship, Xiamen University (3%) 09/2020
- Second-class Scholarship, Xiamen University (10%) 08/2019
- Second Prize, XMUM Public Speaking Contest 2019 05/2019
- The Highest score in Malaysia, Simon Marais Asia-Pacific Mathematics Competition 10/2018
- Outstanding Award, Mathematics Competition, Xiamen University Malaysia 08/2018