Hangzheng Lin

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Education

University of Illinois at Urbana-Champaign Champaign, IL
Master/PhD of Electrical and Computer Engineering Jun. 2023

- Relevant work: Machine Learning with large dataset, Computer vision, 3D reconstruction.

Zhejiang University **GPA: 3.94/4.0** Hangzhou, China
Bachelor of Engineering in Electronic and Computer Engineering Jun. 2021

- Selected Honors: Outstanding Graduate of Zhejiang Province (top 4% in Zhejiang Province, 2021), Outstanding Graduate of Zhejiang University (2021), Dean's List (2020), Zhejiang Provincial Government Scholarship (2019), Zhejiang University Scholarship - First Prize (top 3%, 2019), Outstanding Student (2017 to 2019), Academic Excellent Award (2017 to 2019), Top Ten Social Practice Teams (Volunteer team, 2019).

University of Illinois at Urbana-Champaign **GPA: 3.93/4.0** Champaign, IL
Bachelor of Science in Computer Engineering May 2021

- Relevant Coursework: Applied Parallel Programming, Communication Networks, Natural Language Processing, Machine Learning, Data Science and Engineering, Data Mining, Computer System Engineering, Artificial Intelligence, Data Structures, Interactive Computer Graphics.

Research Experience & Competition

Accurate 3D Tooth Pose Estimation for Diagnosis using Deep Learning Remote
ECE Department, Zhejiang University May. 2021 - Present

- Introduced the first approach with deep learning methods for accurate and automatic 6D tooth pose estimation, which is already integrated into clinical software for orthodontics in China.
- Demonstrated the excellent performance of our method with comprehensive experiments on a newly collected large dataset.
- Revealed the relationship between axial orientation difference of occlusive teeth and gingival atrophy, which might be helpful for dentists to identify the gingival atrophy in advance.

Deep Learning Models for Human Aggression Detection Hangzhou, China
ECE Department, University of Illinois at Urbana-Champaign May. 2020 - May. 2021

- Created our own dataset which we manually cut and labeled from the internet to evaluate its flexibility.
- Reproduced and compared the performance of several vision-based neural network models, including the Transfer Learning model, Conv-LSTM and 3D convolution model, on human aggressive behavior.
- Developed new CNN models, including optical flow based VGG and transfer learning + LSTM models.

Mathematical Contest in Modeling Remote

- Selected, configured, optimally packed, deployed, and operated a set of midsize (group 2) unmanned aerial vehicles (UAV) that would supplement existing relief to medical supply chains in Puerto Rico.
- Provided a stable model to solve the two NP problems with high usage of containers, quick speed to meet the hospital's needs.
- Awarded the Outstanding Winners (0.1%) and the Informs Award (No.1 world ranking 0.02%).

Work Experience

Huawei HiSilicon. Hangzhou, China
AI Chip Operator Developer Jul. - Aug. 2019

- Involved in the Huawei Turing department and participated in the development of Da Vinci chip operators.
- Accelerated data transmission by optimizing the way to allocate the moving data and divide data into parts with their corresponding buffer and cache.
- Reduced the transmission delay from 50ms to 3ms.

Leadership & Extra-curricular Activities

- ***Teaching Assistant***, *ECE 120 - Introduction to Computing (UIUC)* Aug.2021 - Present & Jan. - May 2021
- ***Teaching Assistant***, *MATH 286: Intro to Differential Eq Plus (ZJU)* Jan. – May 2020
- ***Minister***, Editorial Department, University New Media Center Aug. 2018 - Aug. 2019

Skills

Programming Languages: Python, C/C++, SystemVerilog
Deep Learning Frameworks: TensorFlow, PyTorch