Kaifeng(Calvin) Pang

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EDUCATION

University of California, Los Angeles, Los Angeles, CA, US — Sep 2022 - Now
Master of Science in Electrical and Computer Engineering | **GPA: 4.0**
Relevant Coursework: Matrix Analysis for Scientists and Engineers, Linear Programming, Neural Network and Deep Learning, Foundations of Statistical Machine Learning, Computer Vision

Nanjing University, Nanjing, Jiangsu, China — Sep 2018 - Jun 2022
Bachelor of Engineering in Electronic Science and Engineering | **GPA: 4.37/5.0 (87.4)**
Relevant Coursework: Digital Image and Video Process, Introduction to Data Science, Engineering Fundamental of Artificial Intelligence, Computer Vision, Data Structure and Algorithms, Digital Signal Processing, Principle and Application of Machine Vision, Machine Learning (Coursera)
Honors/Awards: Outstanding Graduates of 2022, People's Scholarship

RESEARCH INTERESTS

Medical Image Analysis, Deep Learning, Computer-aided diagnostics

PUBLICATIONS

- **K.Pang**, Z. Asad, S. Zhao, Y. Huo., MAg: a simple learning-based patient-level aggregation method for detecting microsatellite instability from whole-slide images. **2022 IEEE 19th IEEE International Symposium on Biomedical Imaging (ISBI)** [paper][conference oral presentation]

RESEARCH EXPERIENCES

Super-resolution for Magnetic Resonance Imaging — Jan 2023 - Now
Graduate Student Researcher | Advisor: Dr. Kai Zhao & Prof. Kyung Sung, Sung Lab, Magnetic Resonance Research Labs, UCLA
- Conduct research on using deep learning to achieve super-resolution between MRI slices
- Currently in progress and aimed to develop a model that can magnify the resolution of MRI slices by arbitrary factors

Deep Learning for Microsatellite Instability (MSI) Detection in Tumor Diagnosis and Treatment[GitHub] — Jun 2021 - Nov 2021
Summer Researcher | Advisor: Prof. Yuankai Huo, HRLB Lab, Vanderbilt University
- Revamped existing deep learning models for microsatellite instability detection on datasets of 180,000 images to facilitate its use in tumor diagnosis and treatment
- Proposed a simple learning-based patient-level aggregation method for detecting microsatellite instability from whole-slide images which summarizes patch-level probabilities to patient-level results to improve the performance of classification
- Designed a function library that users can call directly to optimize the performance of the MSI&MSS classifier
- The paper of this project paper has been accepted and published by **2022 IEEE 19th International Symposium on Biomedical Imaging**

Reliable Pedestrian Tracking Based on Single-view RGB-D Images[GitHub] — Sep 2021 - Jun 2022
Undergraduate Research Assistant | Advisor: Prof. Yang Li, emAI Lab, Nanjing University
- Used RGB-D images with depth information to improve the skeleton connections in the scene of human occlusions and overlapping
- Explored several different RGB-D feature fusion networks while proposing a cross-fusion feature network which fuses RGB-D features at different depths of the network
- Proposed a cascade pipeline that combines different tasks including human pose estimation, human detection and human tracking
- Verified the effectiveness of the proposed RGB-D cross-fusion feature network by COCO-AP index and self-designed indexes

STUDENT WORKING EXPERIENCES

Student Union of School of Electronic Science and Engineering (SESE), Nanjing University — Sep 2018 - Oct 2021
President of Student Union (06/20 - 10/21)
- Oversaw the daily operations of the Student Union, coordinating inter-departmental affairs
- Hosted several large-scale on-campus activities
Awarded **Outstanding Leader of the Student Union in NJU (2020)**

TECHNICAL SKILLS

Programming Language:	Python, C, C++, Matlab
Libraries:	PyTorch, OpenCV, Sklearn, TensorFlow, Pandas
Other Tools:	Jupyter, LaTeX, Microsoft Office, Photoshop