Panfeng Jiang

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Research Interests: Computer Vision, SLAM, Machine Learning, Artificial Intelligence

Education

2024.8 – 2025.6 **University of California, Berkeley (GPA:3.957/4.0)**
Concurrent International in GLOBE program. Major: Computer Science.

2022 – present **ShanghaiTech University (GPA:3.77/4.0)**
Matriculated Undergraduate. Major: Computer Science. Minor: Mathematics and Applied Mathematic (**Ranking 8%-15%** in SIST College in the comprehensive evaluation)

Research Publications

1. S. Hang, L. Tao, **Panfeng. Jiang**, G. Ling, and K. Laurent, "Led matrix-based simultaneous localization and data transmission with an event camera," *(Still Modifying)*, 2023.

- Develop the detection part and new modules for event-based localization, spatiotemporal tracking, and real-time decoding.
- Participated in the process of encoding-decoding, tracking algorithm designing and experimental testing.
- Our efforts highlighted the practical advantages of our solution by using event-based camera, particularly in achieving 64 Kbps of bandwidth and centimeter-level positioning accuracy, beyond the capabilities of CMOS cameras.

Research Experiences

2023.4 – present **Mobile Perception Lab**
Research Advisor: Prof.Laurent Kneip, ShanghaiTech University

Relevant Course Projects

Computer Visioin **Disentangling Object Motion for Self-supervised Depth Estimation**(Self-supervised depth estimation heavily suffers from the mismatch of the photometric consistency caused by moving objects. And we trying to mitigate the negative impact caused by this.)

SLAM **Instance-level Object Pose Estimation with an Event Camera**(Event camera is able to track fast object motion, and based on this advantage, I am going to track the 6DoF object motion given the object CAD model by using convex-hull detected and ICP algorithm based methods.)

Toy realization of Ordinary& Scale-aware & Jump-aware Pose Graph Optimization,Visual Odometry, Particle Filter and Five-point Minimal Solver for Event Camera Relative Motion Estimation.

Machine Learning **Use multiple models for quality prediction** (discuss the advantages and disadvantages of logistic regression, random forest, XGBoost models, and combine principal component analysis and Huber Loss for model performance optimization)

Working Experiences and Social Participation

2024.11 Served as a **staff, referee** in Rubik's Cube competitions(Bay Area Speedcubin' 65 - Berkeley 2024, Berkeley Fall 2024, Berkeley October Weekday Tricubealon 2024, Cool Down Berkeley 2024.)

2023.12 Served as a **referee** in Changsha Rubik's Cube Open 2023

2023.8-11 Served as a **volunteer** in the summer camp of ShanghaiTech University , Shanghai Planetarium , Shanghai Library and the 27.5km mark of the 2023 Shanghai Marathon

Working Experiences and Social Participation (continued)

2023.7 – 2023.8 Served as a **teaching assistant** in the New Oriental TOEFL course, responsible for course quality supervision and feedback, after-class homework assignments and corrections, and course answering for classmates

Skills

Languages English(Fluent), Mandarin Chinese(First language).

Coding Python,C/C++

Experimental skills Usage of ROS (Robot Operating System) , event-based camera, motion capture system.

Knowledge Algorithms and Data Structure, Machine Learning, Visual SLAM, Event-based Vision, Deep Learning, Abstract Algebra.

Miscellaneous Experience

Awards and Achievements

2024.11 **Provincial Third Prize in the China Undergraduate Mathematical Contest in Modeling (CUMCM).**,

2023.12 **Department Prize for Outstanding Student Performance**, ShanghaiTech University.

Certification

CET-6 573

2023.9 **TOFEL iBT 91**

2023.3 **Certified as RHCE (Red Hat® Certified Engineer)**. Awarded by Red Hat,Inc.

Certified as RHCSA (Red Hat® Certified System Administrator). Awarded by Red Hat,Inc.

2022.12 **CET-4 642**

GPA in Major Courses

Overall GPA 3.77/4.0(Ranking in all Computer Science students:16/169,Ranking in all SIST students:27/243).

2025 Spring(Undertaking)
- Deep Nerual Networks
- Elementary Algebraic Geometry
- Introduction to Computer Graphics
- Abstract Linear Algebra
- Optimization Modols in Enginerring

2024 Fall(in UC Berkeley)
- **Introduction to Abstract Algebra**(A+)
- **Introduction to Artificial Intelligence**(A)
- **Efficient Algorithms and Intractable Problems**(A)

2024 Spring
- **Computer Architecture I and Lab**(A)
- **Simultaneous Localization and Mapping**(A)
- **Introduction to Machine Learning**(A+)

2023 Fall
- **Algorithm and Data Structure**(A+)
- **Computer Vision I**(A)

2023 Spring
- **Discrete Mathematics**(A)
- **Mathematical Analysis II**(A)

2022 Fall
- **Introduction to Information Science and Technology**(A-)
- **Mathematical Analysis I**(A)
- **Linear Algebra I**(A-)