

Jason Qin

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Born in San Diego, California, USA | US citizenship

EDUCATION

Peking University, Bachelor of Computer Science

Beijing, China

Sep 2019 – July 2023

- Certificate in Computer Science
- Special Humanities Courses: Introduction to Psychohygiene
- Special Art Courses: Close Reading on Filmic Texts, History of Chinese Fine Arts, The Enjoyment of Music
- Innovative Start-up Entrepreneurship Course: we investigated the possibility of opening up an environmentally friendly resort in rural areas, and our business plan was judged the best among the 10 proposals in the course

RESEARCH EXPERIENCE

Research Intern, Computer Vision & Digital Art Laboratory, Peking University

Beijing, China

Sep 2021 – Present

- Lead creator of the Wusi_Dataset, in which basketball players were filmed while playing and the movement was converted to a database for potential use in motion/pose prediction research. (Ongoing, soon to be published on arXiv)
Smoothly communicated with the women's varsity basketball team to organize the video shooting plan.
Integrated a fast and accurate system for ball detection, localization, 3D reconstruction, and pose estimation.
Created a postprocessing algorithm to deal with outliers and noise, making the motion data more fluent, adaptable, and robust.
Provided an automatic interface for all users to freely customize data sampling and division, making the dataset easy to adapt to all input and output standards.
Completed scripts to visualize the results in 3D_skeleton view and as reprojections in 11 views, allowing users to conveniently monitor the visualized results.
The resulting Wusi_dataset proved superior to two existing datasets (CMU-mocap, Mupots) in terms of total shooting length, clip length, action amplitude, annotation, and interaction intensity.
- Lead author of Social Motion Prediction (SoMoPred). (Ongoing, soon to be published on arXiv)
Proposed a new dataset for group motion tasks and a new method for group motion prediction based on the Motion Diffusion Model (MDM) and Multi-Range Transformers (MRT), which may be useful for designing and optimizing autonomous vehicles, smart cities, and other research based on computer vision.
Conducted experiments in training, testing, data processing, and comparing results between different methods with multiple datasets.
The current results proved superior to results from Multi-Range Transformers from a qualitative perspective.
- Conducted research in the "Artificial Intelligence in Physical Education" (AIPE) project, aiming to improve the performance of athletes, especially basketball players, during the COVID-19 pandemic.
Conducted experiments to calibrate the camera array, de-distort images, and localize 2D points in a certain image.
Trained a highly customized basketball-detecting model based on the YOLOv5 system with high accuracy (>99%).
- Systematically reviewed the state of the art in computer algorithms for mapping trajectories and predicting poses such as in sports

Research Intern, Animation Laboratory, Peking University

Beijing, China

Mar 2021 – Jun 2021

- Researched algorithms to estimate poses
Analyzed human skeletons in the form of BVH files and created a BVH-Loader from scratch.

PROFESSIONAL EXPERIENCE

Algorithm Intern, Datacloak (www.datacloak.cn)

Shenzhen, Guangdong, China
June 2022 – Sep 2022

Start-up company in the data security industry with the second-largest financing amount in China

- Thoroughly researched the development of data security techniques and data security practices at industry leaders including Google, Microsoft, and Amazon. The robustness of computer vision-aided document watermarking technology inspired me to consider how computer vision could apply to the security industry.

Technical Artist Intern, CocoCartoon (www.cococartoon.com)

Chengdu, Sichuan, China
Aug 2021 – Oct 2021

The company that produced the animated film *Nezha* (Nominated as the best international film of the 92nd Academy Awards in 2020)

- Helped debug rendering and animation pipelines in Python.
- Wrote Python scripts to speed up the uploading of pictures into the 3D computer graphics software Houdini.

Algorithm Intern, Melux (www.melux.com)

Guangzhou, Guangdong, China
Jan 2021 – Feb 2021

A new generation of artificial intelligence micro-feature perception technology provider

- Deeply involved in the development of the paper quality control system. Annotated XML data and wrote Python code to analyze XML files. Trained a PAS187 model to increase its accuracy by 50%.

LEADERSHIP EXPERIENCE

Captain, Men's Volleyball Team of Peking University

Beijing, China | Oct 2020 – Nov 2021

- Organized training sessions and daily activities for the team.
- Engaged in conflict management, team building, and recruited 30 new team members.
- Helped win the Beijing Capital University Volleyball League Championship against more than 50 other teams.

Chairman, Student Union, Chengdu No. 7 High School

Chengdu, Sichuan, China | May 2016 – May 2018

- Led the organization of more than 20 large activities, including galas and academic activities.
Invited the principals of the top 10 high schools in China to give lectures and visit my school.
Organized a New Year's party for 4000 faculty and students.
Directed my graduation ceremony involving 1000 faculty and students
- Represented 3000 students at my high school at a provincial meeting on youth academic development.

Co-founder, Adolescent Anti-Depression Organization,

Chengdu, Sichuan, China | Oct 2017 – Oct 2018

Chengdu No.7 High School (<https://mp.weixin.qq.com/s/9dzciSuVkpSZLQ8ASwtcwg>)

- Overcame resistance from high school leadership to found this organization.
- Hosted student lectures by prominent faculty members on the introduction and prevention of depression.

SELECTED HONORS

Peking University Scholarship for Foreign Students (44 scholarships awarded among 304 eligible students)

2019

LANGUAGES AND OTHER INTERESTS

Computer coding: C, C++, Python, Java, MATLAB, R, Verilog

Languages: English (TOEFL: 112/120; Speaking 29/30; mother tongue), Mandarin (HSK6 281/300; proficient).

Sports Interests: volleyball, golf, tennis, badminton, parkour