HANWEN SHEN

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Actively Seeking 2020 Summer Internship in Computer Vision/Software Engineering

EDUCATION

Johns Hopkins University — Baltimore,MD

· **M.S.E. in Computer Science** — April 2019 - May 2021 (Expected)

Beijing Institute of Technology — Beijing, China

· **B.S. in Computer Science** — Sep 2015 - Jun 2019

· Overall GPA: 89.02/100 (3.83/4.00), Major GPA: 90.93/100 (3.90/4.00), Outstanding Graduate Student (10%)

· Relevant Courses: Data Structure & Algorithm Design, Comprehensive Training for Software Engineering, Linux Programming, Computer Network, Database Systems Development, Modern Data Analysis, Object-Oriented Programming

TECHNICAL STRENGTHS

Computer Languages	C/C++, Python, MATLAB, Java, C#, HTML
Software & Tools	OpenCV, OpenCL, Linux, Git, MySQL, PyTorch, Unity3d, Photoshop

EXPERIENCE

Beijing Laboratory of Intelligent Information Technology — Beijing, China

Bachelor's Thesis Design Project — Dec 2018 - Jun 2019

· Proposed a novel constraint using contour information of two input images to better describe "edge-line" based on Bobick's paper

· Set the constraint using simple geometry made easy by aligned-contours, resulting in more accurate occlusion judgement

· Improved the performance of Bobick's original algorithm by 30% on Middlebury Stereo Vision data sets

· Planned to incorporate deep learning with this method to achieve better overall performance in the future

Software Intelligence Laboratory of Beijing Institute of Technology — Beijing, China

Research Assistant — Nov 2018 - Jan 2019

· Finished a human pose estimation project to demonstrate real-time human pose with virtual characters in Unity3d

· Combined depth information provided by a single stereo camera with the 2D coordinates estimated by CMU OpenPose library

· Established a simple socket connection to solve the data transmission problem between C# and C++

· Achieved 25 fps and prompted the project to be adopted by a private company

Beijing Laboratory of Intelligent Information Technology — Beijing, China

Research Assistant — Oct 2018

· Participated in the research of on-the-fly 3D surface reconstruction of on-road vehicles with data collected from LiDAR

· Used MATLAB to find target information of on-road vehicles from sparse point cloud and do simple data cleaning

· Assisted the team in coming up with a TriSpaFusion method and a CVPR candidate paper

PerfXLab — Beijing, China

Software (Computer Vision) Intern — Jul 2018 - Sep 2018

· Contributed to an open-source simplified OpenCV library using C and OpenCL by compiling and studying OpenCV source code, and achieved higher efficiency on GPU, leading to applications on video-stitching

Software Intelligence Laboratory of Beijing Institute of Technology — Beijing, China

Research Assistant — May 2018 - Jul 2018

· Built an optic axis automatic calibration system, featuring a data processing module, a UI module, and a motor-control module

· Utilized object-oriented method to build the software and used camera SDK to collect and display laser data

· Added crosses to demonstrate the target centre with each frame, meanwhile managed to synchronize the whole procedure

· Prompted the system to be accepted by Beijing Remote Sensing Equipment Research Institute

HONORS & AWARDS

Outstanding Bachelor's Thesis, Beijing Institute of Technology, 2019

Third Prize of 2019 College Students AI Camp, China Center for International People-to-People Exchange, 2019

Champion of Luzhanqi in University Computer Games Championship, China Association of Artificial Intelligence, 2017