

HANWEN SHEN

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Actively Seeking Summer Internship in Computer Vision/Software Engineering

EDUCATION

- Johns Hopkins University** Aug 2019 - Present
- **M.S.E. in Computer Science** (expected May 2021)
- Beijing Institute of Technology** Sep 2015 - Jun 2019
- **B.S. in Computer Science**
 - Overall GPA: 89.02/100 (3.83/4.00), Major GPA: 90.93/100 (3.90/4.00), Outstanding Graduate Student (10%)

TECHNICAL STRENGTHS

Computer Languages	proficient: C/C++, Python; prior experience: Java, MATLAB, C#
Software & Tools	PyTorch, OpenCV, OpenCL, LaTeX, Photoshop, Vim, MySQL, Unity3d

EXPERIENCE

- Beijing Laboratory of Intelligent Information Technology** Dec 2018 - May 2019
Contour-based Stereo Matching *Research Assistant*
- Studied the classic computer vision problem of stereo matching, focusing on handling occlusion during optimization
 - Proposed a novel constraint to better describe occlusion by utilizing contour information of two input images
 - Improved the performance of traditional methods by 30% and wrote a graduation thesis on this research

- Software Intelligence Laboratory of Beijing Institute of Technology** Nov 2018 - Jan 2019
Human Pose Estimation Based On Deep Learning *Research Assistant*
- Worked in a team of four people and finished a project to demonstrate real-time human pose with Unity3d
 - Installed the CMU OpenPose library and customized its 3D module using depth information provided by a single stereo camera and built a 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** Oct 2018
Sparse 3D Reconstruction of On-road Vehicles *Research Assistant*
- 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** Jul 2018 - Sep 2018
Open-Source PerfCV Project *Software Engineering (Computer Vision) Intern*
- 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** May 2018 - Jul 2018
Optical Axis Automatic Calibration System *Research Assistant*
- Worked as the leader of an undergraduate team to figure out the software part of 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, including showing certain crosses 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