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 - Jun 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