

# HANWEN SHEN

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Actively Seeking 2020 Summer Internship in Software Engineering

## EDUCATION

**Johns Hopkins University**

Baltimore, MD

· **M.S.E. in Computer Science**

Aug 2019 - May 2021 (Expected)

**Beijing Institute of Technology (BIT)**

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, Image Processing Technology, 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—Contour-based Stereo Matching

Dec 2018 - Jun 2019

- Conducted research investigation on stereo matching and implemented algorithms of classical papers using MATLAB
- Proposed a novel constraint of correspondent pixels based on geometry observation made easy by aligned-contours from two input images, resulting in more accurate occlusion judgement during optimization process
- Improved the performance of classical algorithms 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—Human Pose Estimation Based On Deep Learning

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 a performance of 25 fps and prompted the project to be adopted by a private company

**PerfXLab Technology Co., Ltd.**

Beijing, China

Software Intern—Open-Source PerfCV Project

Jul 2018 - Sep 2018

- Contributed to an open-source simplified OpenCV library using C and OpenCL by compiling and analyzing OpenCV C++ 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—Optical Axis Automatic Calibration System

May 2018 - Jul 2018

- Built an optical 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 in C# 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
- Tested and debugged the whole system, and prompted it to be accepted by Beijing Remote Sensing Equipment Research Institute

**Neusoft**

Beijing, China

Software Engineering School Intern—Linpop Chatting Tool Project

Aug 2017 - Sep 2017

- Designed and maintained a database for a lightweight chatting software using MySQL under Linux environment, also provided C function interface to the server end, supporting multi-needs including group chat

## 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