

Jiawei Mo

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WORK EXPERIENCE

Perception R&D Intern, Waymo, Mountain View, CA 05/2020 - 09/2020
Worked on sensor fusion in the calibration team

Research Intern, Facebook Reality Labs, Redmond, WA 06/2019 - 08/2019
Worked in the SLAM team

Graduate RA/TA, University of Minnesota, Minneapolis, MN 09/2017 - Present

Software Management Trainee, TempWorks Software, Eagan, MN 12/2014 - 05/2015
Developed Aida, a CRM software for staffing management, using Meteor and MongoDB

EDUCATION

Ph.D: Computer Science, University of Minnesota, Twin Cities 01/2017 - Present
Interactive Robotics and Vision lab, visual SLAM, sensor fusion

M.S.: Computer Science, University of Minnesota, Twin Cities 09/2015 - 12/2016
GPA: 3.83 / 4.0, transferred to Ph.D.

B.S.: Computer Science, University of Minnesota, Twin Cities 09/2013 - 05/2015
GPA: 3.60 / 4.0, Dual degree with University of Electronic Science and Technology of China

PUBLICATIONS

Extending Monocular Visual Odometry to Stereo Camera Systems by Scale Optimization IROS19

A Fast and Robust Place Recognition Approach for Stereo Visual Odometry Using LiDAR Descriptors IROS20

Design and Experiments with LoCO AUV: A Low Cost Open-Source Autonomous Underwater Vehicle IROS20

PROJECTS

SafeDrive (IROS 2017 Poster) 12/2016 - 06/2017
An algorithm to recover lane markers when they are invisible (e.g., covered by snow)
1. Find alternative street views in a database, reconstruct a 3D model of the street
2. Project 3D lane makers onto the current image according to the geometric relationship

Waiter Robots 10/2016 - 12/2016
Enabled robots to work as waiters in restaurants, taking orders and payments, passing food, etc.
Voice recognition, face recognition, mapping, localization

Kinect SLAM 03/2016 - 05/2016
Implemented EKF SLAM using Pioneer 1 robot and Kinect

FPS Game based on Augmented Reality 04/2016 - 05/2016
Implemented an FPS game where the weapon is controlled by a camera in the real world
Vuforia AR kit, Unity Engine

Multi-Agent Collaborative Localization 10/2015 - 12/2015
Collaborative localization to improve accuracy and enable quick recovery after being kidnapped
1. Robots detect teammates, estimate their poses, and share pose estimations
2. Robots fuse the received pose estimations to improve localization accuracy

Visual Registration System 09/2014 - 12/2014
An Android application to register class graphically
User research, prototyping, development, cognitive walkthrough, heuristic evaluation, user test

Kix to C++ Translator 02/2014 - 05/2014
A translator for Kix, a functional programming language, to C++
Iterative software development, automatic test using Cxxtest, documentation by Doxygen