

Jiaxin Zhang

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Education

Boston University, College of Engineering <i>Master of Science in Electrical and Computer Engineering (Robotics Specialization)</i>	Boston, MA May 2020 Exp.
University of Science and Technology of China <i>Bachelor of Science in Physical Electronics, School of the Gifted Young</i>	Hefei, China June 2018

Experience

Research Assistant , University of Notre Dame, Notre Dame, IN	Summer 2017
<ul style="list-style-type: none">Implemented and processed all experiments data.Explored and designed Binarized algorithm for Deconvolution-Based Generators.	
Teaching Assistant , Peking University, Beijing, China	Summer 2016
<ul style="list-style-type: none">Conducted weekly lectures in Calculus for an Economics course.	
Research Assistant , National Tsing Hua University, Hsinchu, Taiwan, China	Spring 2016
<ul style="list-style-type: none">Conducted experiments and explored modelling for paper twisting patterns.	

Projects

Robotic Arm Control in Gazebo , Boston, MA	Fall 2018
<ul style="list-style-type: none">Designed and Built a Robotic Arm with ROS in gazebo with a team of four.Implemented PCL and PointNet to process point cloud data for semantic segmentation.Implemented motion planning and control for the robot with Moveit.Integrated Alexa interface that allowed users to control Robotic Arm with their voice.	
FPGA based BNN Acceleration , Hefei, China	Spring 2018
<ul style="list-style-type: none">Implemented Binarized Convolutional Neural Networks(BNN) in a FPGA device(Xilinx ZedBoard).Achieved 93% Accuracy on ASL FingerSpelling dataset.Achieved 70 frames/secs processing speed for a 9-layer-BNN within only 2.4W power supply.	
PBGen , Notre Dame, IN	Summer 2017
<ul style="list-style-type: none">Explored and designed Partial Binarized algorithm for Deconvolution-Based Generators.Achieved 25x saving in memory and 1.9x speed up with little performance loss.Published as second author, see the paper at arxiv.org/pdf/1802.09153.	
Eye Tracking System , Hefei, China	2015 - 2016
<ul style="list-style-type: none">Designed and built a system with helmet, Lidar and camera that track the user's gaze point.Used infrared camera integrated in the helmet to catch eye's movements.Implemented sensor fusion algorithms for IMU and Vive Lighthouse to get the helmet's 6DoF.Controlled a Pan-Tilt Camera to follow the user's gaze point.Designed and built auto calibration system for the helmet and pan-tilt camera.	

Skills

Programing Languages: Python, C/C++, MATLAB, LabVIEW
Developing Experience: ARM Cortex-M4 based on Kinetis K60, Xilinx ZedBoard
Others: Linux, ROS, PCL, Git, Makefile, Xilinx SDSoC and VivadoHLS