# Junru Wu

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RESEARCH INTERESTS Computer Vision, Artificial Intelligence

**EDUCATION** 

#### Tongji University, Shanghai, China

Sept. 2012 - July 2016

B.Eng. in Electronics and Information Engineering

- Thesis: Pedestrian Detection with Machine Learning Advisor: Prof. Shangzhi Xu
- GPA: 83.74/100
- Core Course:

Fundamentals of Computers, C/C++ Programming, Digital Signal Processing, Software Technology, Computer Networks, Digital Electronic Technology, Embedded Systems

**PUBLICATIONS** 

**Junru Wu**, Yanyu Xu, Nianyi Li, Jingyi Yu, and Shenghua Gao. "Beyond Universal Saliency: Personalized Saliency Prediction with Person-specific Information" submitted to *International Conference on Computer Vision (ICCV)*, 2017.

RESEARCH EXPERIENCE

### ShanghaiTech Univeristy, Shanghai, China

Aug. 2016 - Present

Visual Computing Lab (Director: Prof. Yi Ma)

Research Assistant

#### • Personalized Saliency Prediction with Multi-branch CNN

- -Investigate the heterogeneous gaze patterns of individuals when viewing an identical scene based on eye-tracker collected data
- -Adopted a Multi-branch Convolutional Neural Network to model the proposed personalized saliency maps. [submitted to CVPR 2017]

Advisor: Prof. Shenghua Gao

### Tongji University, Shanghai, China

Jan. 2016 - July 2016

Undergarduate Research Assistant

#### • Pedestrian Detection with Machine Learning

- -Built an pedestrian detector with Pyramid HOG features and Intersection Kernel Support Vector Machine.
- -Performed comperhensive experiments on INRIA Pedestrian Dataset and compare model performance against state-of-the-art methods.

Advisor: Prof. Shangzhi Xu

PROJECT EXPERIENCE

Student Innovation Training Program, Tongji University

June 2015 - June 2016

## • Crowd tracking in Aerial Video

- -Implemented a automate surveillance system to detect and track pedestrians in aerial video captured by UAVs.
- -Employed background subtraction based on Gaussian mixture models to detect moving pedestrians and used Kalman filter to track them.

Advisor: Prof. Yuchuan Du

Course Projects, Tongji University

### • Implementation of an OFDM systems using GNU Radio

 $Summer\ 2015$ 

- Built an OFDM based communication systems based on the GNU Radio Software platform.
- Evaluations and Comparisons on Edge Detection Methods

Summer 2015

- Performed quantitative comparisons across common Edge Detection Methods such as Canny, Sobel, Laplacian, Prewitt, Roberts and Differential.

#### • An Analog Signal Generator

Summer 2014

- Built a Analog Signal Generator based on a Sine-wave Oscillator to generate sinusoidal wave.

Professional Experience

#### Delphi Technical R&D Center, Shanghai, China

July 2015 - Sept. 2015

System Engineering Intern

• Used Altium Designer software to design PCB Layout for the Intergrated test bench of Body Control Module (BCM).

Supervisor: Zhiqang Yao, Engineering Group Manager

AWARDS

• Mathematical Contest in Modeling (MCM), Honorable Mention

• China Undergraduate Mathematical Contest in Modeling (CUMCM),

Third-class Prize

• Student Innovation Training Program, First Prize, Tongji University

• Semester Scholarship, TU Darmstadt (DAAD)

• Academic Record Scholarship, Tongji University

Spring 2016 Fall 2015

Summer 2016

Fall 2014 Fall 2013

SKILLS

Programming languages

• C, C++, Python, MATLAB, Shell script

Programming Tools

• Caffe, Tensorflow, OpenCV, LATEX

EDA Tools

• Altium Designer, Protel, Multisim

Languages

Chinese: Native English: Fluent German: Intermediate

EXCURRICULAR ACVTIVITIES

Technische Universitaet Darmstadt, Darmstadt, Germany

Oct. 2014 - Feb. 2015

Exchange Student

• Served as the team leader of the exchange students from Tongji University, coordinated collective activity with Intercultural Team of Tutors (ITT).

• Attended Intensive Language Courses and Cultural Course at TU Darmstadt.

Tongji University Students' Union

Sept. 2013 - Jan. 2015

Student Member

• Assisted in planning events includes "Top ten school singers" attracting over 500 guests.

• Assisted in running official accounts and web page for the Students' Union.

Xuhui Museum of Art, Shanghai, China

Sept. 2013 - July. 2014

Student Volunteer

REFERENCES

Shenghua Gao

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School of Information Science and Technology

ShanghaiTech Univeristy E-mail: gaoshh@shanghaitech.edu.cn

Shangzhi Xu

Assistant Professor Phone: +(86)181-4979-0296

College of Electronic and Information Engineering

Tongji University E-mail: xushangzhi@tongji.edu.cn