Junru Wu

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Research Interests

Saliency Detection, Computer Vision, Machine Learning

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. "Personalized Saliency Prediction with Person-specific Information" *International Conference on Computer Vision (ICCV), 2017* (under review).

Yanyu Xu, Nianyi Li, **Junru Wu**, Jingyi Yu, and Shenghua Gao. "Beyond Universal Saliency: Personalized Saliency Prediction with Multi-task CNN" *IEEE International Joint Conference on Artificial Intelligence (IJCAI), 2017* (accepted).

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. [IJCAI 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 Univeristy *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 Univeristy
- **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*

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: Zhigang Yao, Engineering Group Manager

AWARDS
- Mathematical Contest in Modeling (MCM), Honorable Mention *Spring 2016*
- China Undergraduate Mathematical Contest in Modeling (CUMCM), Third-class Prize *Fall 2015*
- Student Innovation Training Program, First Prize, Tongji University *Summer 2016*
- Semester Scholarship, TU Darmstadt (DAAD) *Fall 2014*
- Academic Record Scholarship, Tongji University *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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ShanghaiTech Univeristy E-mail: gaoshh@shanghaitech.edu.cn

Shangzhi Xu

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