Yaliang Wang

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Education

- M.S. Computer Science, Northwestern University. 3.67/4.00. *2014 - present*
- B.E. Automation(Control), Zhejiang University. 3.67/4.00 *2009 - 2013*

Skills

- Python, C++, Javascript, PHP, MATLAB, Latex, Linux, Academic Writing.

Projects

Product Manager & Developer, Social Networking Application. *December, 2014 - present*

- Building a Hybrid App driven on HTML5, jQuery, jQuery Mobile, NodeJS(using EXPRESS), PhoneGap™Build, Parse.com & Heroku.com.
- The App offers event-based social network. Users can post their activities to meet participants and chat with them. More features are under developing.

Algorithm Designer & Coder, Recommendation System in Streaming Music Service. *April, 2015 - June, 2015*

- Developing a K-nearest-neighbor based artist recommender. Python is used for this project.
- Based on the listen history of the users and the tags information of the artist on Last.fm, the recommender predicts the most favorite on a testing user. The current accuracy reached over 30%.

Group Member, Course Projects in Networking. *December, 2014 - March, 2015*

- Developed a Web client and server based on the Minet Stack.
- Implement TCP module on Minet Stack.
- Implement distance-vector algorithm in the context of a simple routing simulator.
- All works are finished in C++.

Algorithm Implementor, Handwritten Digit Recognition, Github, Video(3 mins). *December, 2014 - March, 2015*

- Developed and implemented 2-Layer Neural Network with 1000 hidden neurons.
- Final achieved accuracy: 96.73 % on the MNIST Dataset.

Independent Study, Reinforcement Learning in Bipedal Walking Simulation. *December, 2014 - March, 2015*

- Produced a survey on employing reinforcement learning to achieve humanoid robot walking.

Tech Team Member & Main contributor, Shh...note, an anonymous text app. Github, Live Demo. *Octerber, 2014 - December, 2014*

- Developed the front-end based on HTML5, CSS3, jQuery & jQuery Mobile and the back-end on PHP(using Silex), PostgreSQL & Google Voice Text API hosted by Heroku.com.
- Client Team is from students at Master Program of Product Design and Development. Agile development methodology is practiced in this project.

Algorithm Designer, Detection, Tracking of Particles and Bubbles in IV Bags, *December, 2014 - present*

- Detection: covert the grayscale image which generated from optical flow into binary image with a threshold produced from the histogram to get separable patches.
- Tracking: match the patches with prediction from Kalman filter based on cost of shape and distance.

Individial, Balance Maintenance for Humanoid Robots Subjected to External Disturbance. Publications, Demo. *December, 2012 - June, 2014*

- First author of the paper published at ICRA 2014, top 1 international conference in robotics.

Awards

- Best Student Application Paper Award, IFAC ICONS 2013, *2013*.
- Zhejiang University 2013 Session Excellent Bachelor Thesis Award, Zhejiang University, *2013*.

Publications

- **Yaliang Wang**, Rong Xiong, Qiuguo Zhu, and Jian Chu, "Compliance Control for Standing Maintenance of Humanoid Robots under Unknown External Disturbances", *2014 IEEE International Conference on Robotics and Automation (ICRA 2014)*, pp. 2297-2304 Hong Kong, China, May 31 - June 5, 2014.
- **Yaliang Wang**, Qiuguo Zhu, Rong Xiong, and Jian Chu, "Standing Balance Control for Position Control-Based Humanoid Robot", *3rd IFAC International Conference on Intelligent Control and Automation Science (IFAC ICONS 2013)*, pp.429-436, Chengdu, China, September 2-4, 2013.
- Chao Li, Rong Xiong, Qiuguo Zhu, Jun Wu, **Yaliang Wang**, Yiming Huang, "Push recovery for the standing under-actuated bipedal robot using the hip strategy", *Journal of Zhejiang University-SCIENCE*, 2014.

Exchange Experience

- Vancouver Summer Business Program, SAUDER School of Business, The University of British Columbia, *July, 2012 - August, 2012*.