Jyun-Fan Tsai

Resume

+886.975.606.275
jyunfan [AT] gmail.com

Education

2004–2006 **M.S.**, *Graduate Institute of Computer Science and Information Engineering*, National Taiwan University, Taipei.

Advisor Professor Li-Chen Fu

Thesis Piecewise-Linear Model for Lane Detection and Automatic Updating for Vehicle Detection

2000–2004 **B.S.**, *Department of Computer Science and Information Engineering*, National Taiwan University, Taipei.

Experience

Jan. 2011–Now **Technical Manager**, Systex Corporation, Taipei.

Description Project: Splunk App for VMware

I am a software design engineer in the Splunk solutions team. We develop an app for monitoring and analyzing VMware environments (including log, inventory, and performance data) on Splunk platform, which is a search engine. My responsibilities is writing modules to fetch and parse logs of VMware server, create web pages for displaying collected data, and test the application.

- Get log data via VMware Perl API.
- Extract timestamp and compose events from log data.
- Create web pages with xml-based language, a domain specific language defined in Splunk platform.

2007–2011 **Research Assistant**, *Institute of Information Science*, Academia Sinica, Taipei.

Supervisor Dr. Tyng-Luh Liu

Description Project: face detection and face recognition (2007-2008)

Our lab has developed a face detection algorithm. My responsibility is to improve both accuracy and speed of the program, so that the program meets the requirements for technology transfer.

- Reduce the quantization error by updating image resizing algorithm, and improve detection accuracy.
- Introduce a public face database to our image database. This improves detection accuracy.
- Use OpenMP to take advantage of parallel processing to speed up training process.
- Handle technology transfer to two companies. The face detection technology made more than one million TWD income for the institution.

Project: image classification (2009-2010)

My colleague has developed a fast algorithm for general object recognition. My responsibility is to implement the algorithm and also compare the performance with other algorithms.

- Most of our code is written in MATLAB. Some critical parts are written in C++ for better speed.
- Speed up computation by splitting jobs and sending jobs to multiple computers via SSH.
- The work is published on a top computer vision conference [1].

2005–2007 **Research Assistant (Part-time)**, *Graduate Institute of Computer Science and Information Engineering*, National Taiwan University, Taipei.

Supervisor Professor Li-Chen Fu

Description Worked on a vision-based driving assistance system that includes video enhancement in night [2] and road scene analysis [3].

2003–2005 **Website Development Manager (Part-time)**, *Computer and Information Networking Center*, National Taiwan University, Taipei.

Supervisor Professor Hsiu-Ping Yueh

Description Developed a website for asynchronous learning. The system contains a forum and an interface that connects a streaming server and a video source.

Awards

2000 Silver medal in the 12th International Olympiad in Informatics (IOI)

2001 Presidential Award of National Taiwan University (Award for top 5% students in the class, 2001)

2000 Third Place in the ACM International Collegiate Programming Contest (ACM-ICPC) 2000 Asia Regional, Taipei Site. Team: God of Power

2004 4th EXIC Golden Silicon Awards

Publications

[1] Yen-Yu Lin, **Jyun-Fan Tsai**, and Tyng-Luh Liu. Efficient discriminative local learning for object recognition. In *International Conference on Computer Vision*, 2009.

[2] **Jyun-Fan Tsai**, Shih-Shinh Huang, Chan-Yu Huang, Li-Chen Fu, and Pei-Yung Hsiao. On road image acquiring and anti-blooming system at nighttime by using high dynamic image reconstruction with motion compensation. *Journal of Vehicle Engineering*, 2006.

[3] **Jyun-Fan Tsai**, Shih-Shinh Huang, Yi-Ming Chan, Chan-Yu Huang, Li-Chen Fu, and Pei-Yung Hsiao. Road detection and classification in urban environments using conditional random field models. In *IEEE Intelligent Transportation Systems Conference*, 2006.

Computer skills

Programming C, Matlab, Perl, C++, PHP

Languages

Chinese **Native**

English **Fluent**

Reference

references available upon request