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OBJECTIVE

I have great interest in the related topics: Pattern Recognition, Machine Learning and Data Mining. Also, I particular focus on their applications in Unmanned Vehicle, Computer Vision and Multimedia Data Mining.

EDUCATION

National Cheng Kung University, Tainan City, Taiwan

Master of Science, Computer Science & Information Engineering, Aug. 2009

G.P.A. major: 91.2/100.0 (overall: 90.7/100.0)

Advisor: Prof. Tseng, Vincent Shin-Mu.

National Chung Cheng University, Chiayi Country, Taiwan

Bachelor of Science, Computer Science & Information Engineering, Jun. 2007

G.P.A. major: 81.57/100.0 (overall: 80.8/100.0, rank: 8/54)

RESEARCH EXPERIENCE

Sep. 2009 to Present

Research Assistant, Institute of Information Science, Academia Sinica

Advisor: Prof. Chen, Chu-Song.

- Video Aesthetic Quality Assessment [1,5]
 - Aesthetic Quality is related to *BEAUTY*.
 - Our aesthetic quality assessor is composed of several novel motion-related aesthetic features and a kernel classifier for judging aesthetic quality.
- Pedestrian Tracking with Occlusion by Particle Filter [6]
 - We combine the silhouette-based likelihood estimation and particle filter to track the pedestrians' locations in the surveillance environment.
 - We propose a likelihood switching between color and shape information to alleviate the estimation computation cost.
- Object Saliency [4]
 - Object saliency is about some regions in the image attracting the audience's visual attention.
 - The salient objects can be well detected by following two principles: rareness and compactness. It is realized by discovering the salient spots first, and then spreading the saliency through their neighbors.

Sep. 2007 to Aug. 2009

Research Assistant,

Dep. of Computer Science & Information Engineering, National Cheng Kung University.

Advisor: Prof. Tseng, Vincent Shin-Mu.

- Context-aware Music Recommendation System [2,7]
 - We presented a unify framework, combining context-aware environment and content-based music recommendation system, and promoted precise tracks to a user according to the one's context data, such as location and weather, and personal listening history simultaneously.
- Video Retrieval [3,8]
 - A high efficient index structure was designed to fuse heterogeneous search results in real time, whereas previous hybrid approaches suffered from heavy computational problem.

Sep. 2006 to Jun. 2007

Research Student,

Dep. of Computer Science & Information Engineering, National Chung Cheng University.

Advisor: Prof. Liu, Damon Shing-Min.

- 3D procedural world - L-system tree generator
 - Natural objects, such as tree and flower, are generated by using L-system in procedural modelling. We use image-based rendering to meet the real-time performance.

WORK EXPERIENCE

Jul. 2007 to Sep. 2007

Summer Internship, MediaTek Inc.¹, HsinChu City, Taiwan.

Manager: Mr. Jovi Chang.

- Product Inspection Tool Development
 - I was responsible for designing a high performance software in multithread environment. This software captures the streaming media from TV chips, examining media's quality.

Sep. 2004 to May 2006

TAship, Computer Center, National Chung Cheng University.

Supervisor: Ms. Tsia, Shu-Chin and Prof. Lee, Sing-Ling.

- E-learning system for faculty in National Chung Cheng University.
 - I was responsible for designing system framework and programming.
- Teaching Assistant for General Course in Designing Comics
 - I was responsible for assisting lecturers during the course hours.

PRESENTATION EXPERIENCE

- IEEE ICIP, Honk Kong, 2010
 - Titled: An Adaptive Approach for Overlapping People Tracking Based on Foreground Silhouettes.
- SIAM Data Mining, Nevada, United State, 2009
 - Titled: An Effective Video Retrieval System by Combining Visual and Textual Mining Techniques.

¹The top company in EECS field in Taiwan.

HONORS

- Thesis Excellent Work, Institute of Information & Computing Machinery², 2009.
 - Thesis titled: “Intelligent Music Recommendation Techniques by Mining Context Information and Musical Contents”.
- Graduate Students Travel Grant³ distributed by Headquarters of University Advancement at National Cheng Kung University, 2009.
- Pan Wen-Yuan Scholarship, distributed by the Pan Wen-Yuan Foundation⁴, 2008.

SKILLS

- Programming: Assembly, C/C++, Java, Matlab, ASP/JSP/PHP with SQL.
- Library: OpenCV/GL/MP, CUDA.
- Language: Chinese (native), English.
 - GRE: V:640, Q:790, AWA:3.0
 - TOEFL: 78 (R:17,L:20,S:17,W:24)

ACADEMIA REFERENCES

- Professor Chen, Chu-Song(song@iis.sinica.edu.tw).
 - Research Fellow in Institute of Information Science, Academia Sinica.
- Professor Liu, Damon Shing-Min(damon@computer.org).
 - Associate Professor in department of Computer Science & Information Engineering, National Chung Cheng University.
- Professor Tseng, Vincent Shin-Mu (tsengsm@mail.ncku.edu.tw).
 - Professor in department of Computer Science & Information Engineering, National Cheng Kung University.
- Professor Wu, Chung-Hsien (chwu@csie.ncku.edu.tw).
 - Deputy Dean of College of Electrical Engineering and Computer Science, National Cheng Kung University.

PUBLICATIONS

- Journal Articles
 1. **Hsin-Ho Yeh**, Chun-Yu Yang, Ming-Sui Lee, Chu-Song Chen.
“Improving Aesthetic Quality Assessment of Videos by Temporal Integration of Photo- and Motion-based Features”. *submitted to IEEE Transaction on Multimedia*.
 2. Ja-Hwung Su, **Hsin-Ho Yeh**, Philip S. Yu, Vincent S. Tseng.
“Music Recommendation Using Content and Context Information Mining”. *IEEE Intelligent Systems*. vol. 25, no. 1, Jan. 2010.
(*citation* ≥ 14 from Google Scholar)
 3. Ja-Hwung Su, Yu-Ting Huang, **Hsin-Ho Yeh** and Vincent. S. Tseng.
“Effective Content-based Video Retrieval Using Pattern Indexing and Matching Techniques”. *Expert System with Application*. vol. 37, no. 7, Jul. 2010.

²The largest association in computing in Taiwan. Acceptance Rate: 20% on average.

³The amount funding is \$60,000 NTD including round trip tickets, conference registration fee, and hotel expense.

⁴It funded top three students per year in each top four graduate school in EECS, Taiwan.

- Conference Papers

4. **Hsin-Ho Yeh** and Chu-Song Chen.
“From Rariness To Compactness: Contrast-Aware Image Saliency Detection”. In Proc. *IEEE International Conference on Image Processing*, Orlando, Florida, USA, 2012.
5. Chun-Yu Yang, **Hsin-Ho Yeh** and Chu-Song Chen.
“Video Aesthetics Quality Assessment by Combining Semantically Independent and Dependent Features”. In Proc. *IEEE International Conference on Acoustics, Speech and Signal Processing*, Prague, Czech Republic, 2011.
6. **Hsin-Ho Yeh**, Jiun-Yu Chen, Chun-Rong Huang and Chu-Song Chen.
“An Adaptive Approach for Overlapping People Tracking Based on Foreground Silhouettes”. In Proc. *IEEE International Conference on Image Processing*, Hong Kong, 2010. (oral)
7. Ja-Hwung Su, **Hsin-Ho Yeh** and Vincent S. Tseng.
“A Novel Music Recommender by Discovering Preferable Perceptual-Patterns from Music Pieces”. in Proc. *ACM Symposium on Applied Computing*, Sierre, Switzerland, 2010. (acceptance rate: 26.9%)
8. Ja-Hwung Su, **Hsin-Ho Yeh** and Vincent S. Tseng.
“An Effective Video Retrieval System by Combining Visual and Textual Mining Techniques”. in Proc. *the Multimedia Data Mining workshop at the 2009 SIAM SDM conference*, Sparks, Nevada, 2009. (oral)
9. Ja-Hwung Su, Bo-Wen Wang, **Hsin-Ho Yeh** and Vincent S. Tseng.
“Ontology-Based Semantic Web Image Retrieval by Utilizing Textual and Visual Annotations”. in Proc. *IEEE/WIC/ACM International Joint Conference on Web Intelligence and Intelligent Agent Technology*, Milano, Italy, 2009.
10. Vincent S. Tseng, Ja-Hwung Su, Bo-Wen Wang, Chin-Yuan Hsiao, Jay Huang and **Hsin-Ho Yeh**. “Intelligent Multimedia Recommender by Integrating Annotation and Association Mining”. in Proc. *IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing*, Taichung, Taiwan, 2008.

references available upon request