

GUANGQI YE

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OBJECTIVE

Seeking a Research/Development position utilizing my technical skills and abilities.

QUALIFICATIONS SUMMARY

Diligent, self-motivated, and highly accomplished Research and Development Professional with more than 10 years of experience driving success in academic research and enterprise development. Solid technical foundation and extensive research experiences complements proven communication skills. Strong background spans areas including pattern recognition, artificial intelligence, machine learning, information retrieval, human-computer interaction, computer vision, e-commerce, and web development. Proven ability to carry out innovative research and to design and build high quality large-scale systems to deliver superior results in fast-paced high pressure environments. Qualifications include demonstrated expertise in the areas including creative research, system analysis, architecture, application design and development.

SKILLS

- **Programming Languages:** C/C++, Java, Perl, Pascal, HTML, XML, Assembly, Lisp, Visual Basic
- **Operating Systems:** Unix/Linux, Windows, Mac OS, DOS.
- **Development Tools:** MS Visual Studio, Delphi, PowerBuilder, CVS, ClearCase
- **Other Skills:** Matlab, SQL, Oracle/Sybase/SQL Server/MySQL, OpenGL, LAMP
- **Areas of Expertise:** Machine Learning, Artificial Intelligence, Computer Vision, Information Retrieval, Database, Computer Graphics, Graph Theory, Robotics, Human-Computer Interaction, Image Processing, Algorithms.

EDUCATION

- **Ph.D. in Computer Science**, The Johns Hopkins University, Baltimore, MD, 2005. GPA: 3.9. Thesis title: Applying Vision To Intelligent Human-Computer Interaction.
- **Master of Science in Engineering in Computer Science**, The Johns Hopkins University, Baltimore, MD, 2002. GPA: 3.9
- **Bachelor of Engineering in Computer Science**, Tsinghua University, Beijing, China, 1998. GPA: 3.8

PROFESSIONAL EXPERIENCE

PAYPAL, AN EBAY COMPANY, San Jose , CA – Staff Software Engineer 2005 – Present
Worked in PayPal's Trust And Safety Engineering department to develop software products to fight online fraud.

- Participated in the PayPal Security Key project, which involved a geographically diverse team of over 140 and multiple third-party companies. Designed and implemented core functionalities of this feature to enable second factor authentication on PayPal.
- Led a team to build PayPal's advanced risk rules engine. It allows intuitive rules authoring, fast and flexible rule release, and highly efficient real-time rule execution and evaluation.
- Designed and implemented PayPal's Risk Analytics Dynamic Datasets framework to allow quick upload and use of heterogeneous datasets that have varied structure and size.

CIRL LAB, THE JOHNS HOPKINS UNIVERSITY, – Research Assistant 2001 – 2005
Participated in the NSF VICs project. Investigated efficient and robust vision-based techniques to model dynamic gestures as well as composite gestures for human-computer interaction.

- Proposed a novel and efficient shape/motion descriptor to capture hand motion.
- Investigated such methods as neural network, extended HMM, finite-state machines to model dynamic gestures.

- Proposed efficient algorithm to model composite gestures using graphical model and HMM. Composite gestures are sequences of heterogeneous gestures including static, dynamic, and parameterized gestures.
- Designed and implemented a flexible vision-based HCI platform. Carried out a human factor experiment on this platform. The experiment involved sixteen subjects and twelve gestures.

HAPTIC EXP. LAB, THE JOHNS HOPKINS UNIVERSITY, – Research Assistant 2002 – 2003
Designed and implemented the VisHap augmented reality system, which uses visual tracking to seamlessly integrate force feedback with tactile feedback to generate a “complete” haptic experience.

DEP. COMPUTER SCIENCE, JOHNS HOPKINS UNIV., – Teaching Assistant 2000 – 2001
Worked as TA for three courses from 2000 to 2001, including Computer Vision, Algorithms, Intermediate Java Programming.

COMPUTER VISION LAB, TSINGHUA UNIVERSITY, – Research Assistant 1997 – 2000
Participated in the face detection, recognition and identification project. Implemented efficient algorithms to carry out face recognition on a database of 500 people. The system consisted of such key modules such as constrained camera rectification, face detection, facial features extraction, and efficient matching.

BLUE BOX INC., BEIJING, CHINA – Software Engineer 1998-1999
Led a team to design and implement a business management system. Development tools used include PowerBuilder, SQL, MS Visual Studio and InstallShield.

NASOFT INC., BEIJING, CHINA – Software Engineer 1998
Joined a team of fifteen engineers to implement the Bank Credit Registration System. This distributed system consisted of such modules as server database management, bank operator interface, Internet access support, and middleware. Such tools as SQL, Sybase PowerBuilder, Visual Basic and HTML were used during development.

AWARDS

- Meteor Shower Award, PayPal, an eBay Company, 2007
- Shining Star Award, PayPal, an eBay Company, 2006
- Excellent Graduate Award, Tsinghua University, 1998
- Excellent Student Scholarship, Tsinghua University, 1994, 1995 and 1998
- Zheng Geru Scholarship, Tsinghua University, 1996 and 1997

SELECTED PUBLICATIONS

- J. Corso, G. Ye, D. Burschka, and G. D. Hager. A Practical Paradigm and Platform for Video-Based Human-Centered Computing. *IEEE Computer*, 41(5), pages 48-55, 2008.
- J. Corso, G. Ye, and G. Hager. Analysis of Multi-Modal Gestures with a Coherent Probabilistic Graphical Model. *Virtual Reality*, 2005.
- G. Ye, J. Corso and G. Hager, Visual Modeling of Dynamic Gestures Using 3D Appearance and Motion Features, in *Real-Time Vision for Human-Computer Interaction*, edited by B. Kisacanin, V. Pavlovic and T.S. Huang, Springer-Verlag, 2005.
- G. Ye, J. Corso, D. Burschka, and G. Hager. VICs: A Modular HCI Framework Using Spatio-temporal Dynamics. *Machine Vision and Applications*, 16(1), pages 13-20, 2004.
- G. Ye, J. Corso and G. Hager. Gesture Recognition Using 3D Appearance and Motion Features. In *Proceedings of CVPR 2004 Workshop on Real-time Vision for Human-Computer Interaction*, 2004.
- G. Ye, J. Corso, G. Hager, and A. Okamura. VisHap: Augmented Reality Combining Haptics and Vision. In *Proceedings of 2003 IEEE International Conference on Systems, Man & Cybernetics*, October 2003.
- G. Ye, J. Corso, D. Burschka, and G. Hager. VICs: A Modular Vision-Based HCI Framework. In *Proceedings of 3rd International Conference on Computer Vision Systems*, 2003, pages 257-267.