

Chen-Hsiang (Jones) Yu

MIT CSAIL
32 Vassar St., 32-G716
Cambridge, MA 02139

Office: 617-253-0945
E-mail: chyu@mit.edu
<http://people.csail.mit.edu/chyu>

EDUCATION

- Massachusetts Institute of Technology (MIT), Cambridge, MA** expected 2012
Ph.D. candidate, EECS
Advisor: Prof. Robert C. Miller, Dept. of EECS, MIT, Cambridge, MA.
- National Taiwan University (NTU), Taipei, Taiwan** 2000
M.S. in Department of Computer Science and Information Engineering (CSIE)
Advisor: Prof. Jieh Hsiang, Dept. of CSIE, NTU, Taipei, Taiwan.
- Tamkang University (TKU), Taipei, Taiwan** 1998
B.S. in Department of Computer Science and Information Engineering (CSIE)
Advisor: Prof. Chin-Hwa Kuo, Dept. of CSIE, TKU, Taipei, Taiwan.

EMPLOYMENT

- User Interface Design (UID) group, MIT CSAIL, Cambridge, MA.** 09/06 - present
Research Assistant
 - Focused on solving web page usability issues in desktop and mobile browsers.
 - Enhanced web page readability for non-native English readers and supported continuous reading for mobile users.
 - Contributed to the Chickenfoot project, which is a Firefox extension providing a programming environment for programmers to write scripts to manipulate Web pages and automate web browsing.
- IBM T.J. Watson Research Center, Cambridge, MA.** 06/10 - 09/10
Research Intern
 - Focused on enhancing the readability of blogs in enterprise social software for non-native English readers.
 - Designed and implemented a Firefox extension, *Clearly*, to utilize web customization techniques and leverage readers' geographic social networks to improve the readability of blogs.
- Quanta Computer, Tao Yuan, Taiwan.** 07/00 - 06/06
Associate Technical Manager
 - Was a technical coordinator of Quanta's Dual-Mode handset project, which was a two-year research project focusing on investigating new technologies for next generation wireless telecommunication.
 - Was a team lead of WAP team (12 members) and Knowledge Repository Team (4 members).
 - Developed a mobile WAP browser for mobile devices and more than 12 mobile devices were commercialized.

TEACHING

- MIT 6.470 Web Programming Competition** MIT IAP in 2008/2009/2010
Instructor and Staff
 - Taught Web programming techniques, including HTML, CSS, DOM, AJAX, JSON and jQuery.
 - Supported teams and students to join the competition.
- MIT 6.813/6.831 User Interface Design and Implementation** 01/09 - 06/09
Teaching Assistant of Prof. Robert C. Miller
 - Graded student assignments.
 - Advised and supported student groups to finish term projects.
- NTU CSIE Information System Training Courses** 06/99 - 07/00
Instructor
 - Designed lecture materials for the training courses.
 - Taught "Internet Web Page Design" and "Multimedia Web Page Design" courses to the public.
- NTU CSIE Calculus Course** 09/98~07/99
Teaching Assistant of Prof. Wen-Ming Yan
 - Graded assignments and answered students' questions.

RESEARCH PROJECTS

Froggy GX: Enhancing Web Page Skimmability for Non-native Readers

The Froggy GX project investigates useful techniques to help non-native English readers skim read web pages. A few techniques are proposed to address this issue: (1) content spotlight, masking and filtering; and (2) semantic data extraction and in-place translation. Froggy GX is a Firefox extension built to demonstrate skim-reading support.

Read4Me: Supporting Continuous Reading on a Mobile Device

- A Semi-finalist in Student Research Competition (SRC) at CHI 2012

The Read4Me project focuses on understanding mobile users' difficulties and proposing innovative ideas to enhance mobile reading and browsing. This research enhances mobile reading and browsing in two directions: (1) using orientation sensor information to detect human natural interaction and text-to-speech (TTS) to continue reading between different activities; and (2) providing a speech interface to ease web navigation and supporting dialog programming for repetitive tasks. Read4Me browser is a prototype system built on top of the Android 2.3 platform to support continuous reading.

Clearly: Enhancing Blog Readability for Non-native English Readers in the Enterprise

Blogs are an important platform for people to access and share information, particularly in corporate settings where users rely on these systems for their work. However, because a global enterprise is multilingual, not all employees can understand the shared information in these systems easily if the content is written in a user's non-native language. The Clearly project focuses on enhancing the readability of blogs in enterprise social software for this group of users.

(Joint work with Jennifer Thom-Santelli and David R. Millen at IBM T.J. Watson.)

Froggy: Enhancing Web Page Readability

The Froggy project focuses on enhancing web page readability for non-native English readers. This research studies the presentation of content and proposes a new transformation method, Jenga Format, to enhance web page readability. We introduce a new Firefox extension, Froggy, which not only implements the studied transformation method, but also introduces new ideas for readability improvement such as (1) automatically detecting and deemphasizing distracting elements and (2) summarizing content by making key sentences stand out.

OTHER PROJECTS

Nom Nom Now

2012

- MIT 2012 iCampus Prize First Round Winners (Judge's Choice Winner)

- The 3rd Place in MIT's Mobile App Development Competition

Never go hungry again! Nom Nom Now allows the user to easily broadcast -- and more importantly, find -- free food. Free food announcements will be parsed from our server and broadcast to all users in real time. User broadcasts (food message and photo) automatically include the user's GPS coordinates for food stalkers' convenience. When searching for food, the map will display the location of food closest to the user. The list of feeds contains all free food broadcasts made recently. When there is a free food message, Nom Nom Now will notify you instantly via the message.

(with David Ogutu and Adisa Kruayatidee)

Mopinion

2011

- A Semi-finalist in MIT's \$100K Executive Summary Competition

Mopinion is a platform that provides organizations with instant consumer feedback, polling and market surveys with statistical precision. The platform contains two parts: Mopinion Mobile and Mopinion Server. Whereas Mopinion Mobile can reach the required demographic from the panelists to provide "instant opinion" services, Mopinion Server does analysis on these data in the cloud and provides an interface for organizations to create mobile surveys.

(with Pooya Nikooyeh, Robert Mitchell and Edoardo Cavalieri d'Oro)

Commercial Products

2000-2006

During my work in the industry, I led teams and developed software for cellphones. More than 12 handsets have been commercialized in the world. Following are selected products. A complete list is upon request.



NEC N110



Philips 568



Panasonic X300



Panasonic G70



Panasonic GD55



Siemens 8008



Giya SL500

Butterpre

2000

- A Finalist in Thesis Competition, Inalways Foundation

Butterpre is a lecture system designed and built to help teachers. There are two main contributions of this project. One is proposing a methodology to utilize the information available in the digital museum of butterflies to demonstrate the education on application. The other is providing mechanisms for extracting and organizing Web pages into lectures, presenting the lecture material in a browser environment, and for downloading user history and records.

- Undergraduate Thesis Award, Acer Foundation

In this project, we designed and implemented a distributed co-editing environment for multiple users. We proposed Serial Judgment Method (SJM), which has a conflict resolving mechanism to eliminate undo operations, to solve data conflicts effectively. The system was developed and deployed at Multimedia Information Networking (MINE) laboratory at Tamkang University. (with Chia-Lin Chio and Wen-Yang Hsia)

PUBLICATIONS**Thesis**

- **Chen-Hsiang Yu.** "Web Page Enhancement on Desktop and Mobile Browsers." Ph.D. Thesis, MIT, 2012. (In progress)
- **Chen-Hsiang Yu.** "Butterpree - Preparing Course Material from a Digital Museum of Butterflies." Master Thesis, Dept. of Computer Science and Information Engineering, National Taiwan University, 2000. (★ A Finalist in Thesis Competition, Inalways Foundation.)

Book Chapter

- Robert C. Miller, Michael Bolin, Lydia B. Chilton, Greg Little, Matthew Webber, and **Chen-Hsiang Yu.** "Rewriting the Web with Chickenfoot." *No Code Required: Giving Users Tools to Transform the Web*, Morgan Kaufmann, 2010.
- Lydia B. Chilton, Robert C. Miller, Greg Little, and **Chen-Hsiang Yu.** "Why We Customize the Web." *No Code Required: Giving Users Tools to Transform the Web*, Morgan Kaufmann, 2010.

Refereed Paper

- **Chen-Hsiang Yu** and Robert C. Miller. "Enhancing Web Page Readability for Non-native Readers." *In Proceedings of CHI 2010*, pp. 2523-2532, April 2010.
- **Chen-Hsiang Yu** and Jieh Hsiang, "Butterpree – Preparing Course Material from a Digital Museum of Butterflies." *In International Conference on Computer Assisted Instruction and Internet Computing (CAIIC'2000)*, October 2000.
- Chin-Hwa Kuo, Chia-Lin Chio, **Chen-Hsiang Yu**, and Wen-Yang Hsia, "In Supporting of Distributed Co-Editing Environment." *In Proceedings of International Computer Symposium (ICS)*, pp. 17-24, December 1998.

Workshop Paper

- Jennifer Thom-Santelli, David R. Millen and **Chen-Hsiang Yu.** "Increasing Cultural Accessibility in a Global Organization." *Position paper at CHI 2011 Workshop, Transnational HCI: Humans, Computers, and Interactions in Transnational Contexts*, May 2011.
- Jennifer Thom-Santelli, David R. Millen and **Chen-Hsiang Yu.** "Cultural Computing: Closing the Gaps in Participation." *CSCW 2011 Workshop, Designing Social and Collaborative Systems for China*, March 2011.
- Chin-Hwa Kuo, **Chen-Hsiang Yu** and His-Tsung Wang, "The flow and concurrency control mechanism in CSCW." *Cross-centuries Information Technology Conference*, pp.114-127, February 1998.

Posters and Demonstrations

- **Chen-Hsiang Yu** and Robert C. Miller. "Enhancing Web Page Skimmability." *To appear at the 2012 Annual Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA'12)*, May 2012.
- **Chen-Hsiang Yu.** "Mobile Continuous Reading." *To appear at the 2012 Annual Conference Extended Abstracts on Human Factors in Computing Systems for Student Research Competition (CHI EA'12)*, May 2012.
- **Chen-Hsiang Yu** and Robert C. Miller. "Enhancing Mobile Browsing and Reading." *Proceedings of the 2011 Annual Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA'11)*, pp. 1783-1788, May 2011.
- **Chen-Hsiang Yu**, Jennifer Thom-Santelli and David R. Millen. "Enhancing blog readability for non-native english readers in the enterprise." *Proceedings of the 2011 Annual Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA'11)*, pp. 1765-1770, May 2011.
- **Chen-Hsiang Yu**, Jennifer Thom-Santelli and David R. Millen. "Clearly." Demonstration presented at *CSCW 2011*.
- **Chen-Hsiang Yu** and Robert C. Miller. "Froggy: A Tool for Enhancing Web Page Readability." *In Adjunct Proceedings of UIST 2008: ACM Symposium on User Interface Software and Technology*, October 2008.

Patent

- **Chen-Hsiang Yu** and Ming-Ru Jiang. "Internal Code Control System and Method for Wireless Data Download." No.205120, R.O.C., Dec. 2004.

Unrefereed Paper

- **Chen-Hsiang Yu** and Robert C. Miller. "The Study of Content Transformation for Web Page Readability Enhancement." *CSAIL Student Workshop (CSW)*, 2009.
- **Chen-Hsiang Yu** and Robert C. Miller. "AINS: Asynchronous Interaction System for Preschoolers." *CSAIL Student Workshop (CSW)*, 2009.
- **Chen-Hsiang Yu** and Robert C. Miller. "Froggy: A Tool for Enhancing Web Page Readability." *CSAIL Student Workshop (CSW)*, 2008.
- **Chen-Hsiang Yu** and Oshani Seneviratne. "Webnnel: A channel-based Web navigation system." *CSAIL Student Workshop (CSW)*, 2008.

- **Chen-Hsiang Yu** and Robert C. Miller. "Web Page Readability Enhancement." CSAIL Student Workshop (CSW), 2007.
- **Chen-Hsiang Yu**, Chia-Lin Chio and Wen-Yang Hsia. "In Supporting of distributedco-editing environment." Acer Foundation, December 1998. (★ **Undergraduate Dragon Thesis Award**)

Talks

- "Web Page Readability Enhancement." EITC-YIC 2011, Harvard University, August 18, 2011.
- "How to use MIT OCW in teaching and learning." Center for Distance Education, TKU, June 12, 2007.
- "The way to Mobile Internet." TKU CSIE, May 11, 2006.
- "Mobile Internet on Mobile Device." NTU CSIE Seminar, December 30, 2005.

CERTIFICATES

- 2010.10: MIT's Graduate Student Teaching Certificate Program.
- 1998.06: TKU's Secondary Teacher Education Program in Computer Science

SERVICES

- Program Committee:
 - The 10th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC 2012)
- Conference Organizer:
 - The First Annual EITA Young Investigator Conference (EITA-YIC 2011)
- Reviewer: UIST'09, CHI'10, CHI'12, UIST'12
- Student Volunteer: CHI'10, CHI'11
- Student Member: ACM, ACM SIGCHI

HONORS & AWARDS

- 2012.05: A semi-finalist in Student Research Competition (SRC) at CHI 2012.
- 2012.03: MIT 2012 iCampus Prize First Round Winner - Judge's Choice Winner.
- 2012.02: The 3rd Place in MIT's First Mobile App Development Competition.
- 2011.01: A semi-finalist in MIT's \$100K Executive Summary Competition (ESC).
- 2003.11: Selected as an Outstanding Military Servant at Quanta Computer Inc. in 2003.
- 2000.12: A finalist in Thesis Competition, Inalways Foundation.
- 2000.08: Lecture Design Competition Award of National Science Council.
- 2000.06: The honorable member of the Phi Tau Phi Scholastic Honor Society.
- 1998.12: Undergraduate Dragon Thesis Award of Acer Foundation.
- 1998.06: Graduated with honor from Computer Science department, Tamkang University. (GPA ranks 1st out of 126 students in the department for four consecutive undergraduate years)
- 1994-98: Honored with Da-Yu Award of Tamkang University six times. The Da-Yu Award is given each semester to students ranking within the top 5% of their class.
- 1998.03: Selected as an "Outstanding College Youth" in 1998, China Youth Corps, R.O.C.

SCHOLARSHIPS

- 2000.05: Ho Shih-Hsien memorial scholarship
- 1997.12: Plastico (BVI) Corp. Chou Chiu-Huo scholarship
- 1997.12: The judicial person Tsung Cho-Chang educational scholarship
- 1997.06: Banchiau Rotary Club educational scholarship
- 1996.11: The judicial person Chiu Hai-Chui scholarship

LEADERSHIP

- 2012.01: Team Lead of Nom Nom Now mobile app (The 3rd Place of MIT's Mobile App Development Competition)
- 2008-10: MIT Westgate Partners Community Coordinator
 - Organized Westgate Orientation Events (>250 attendants)
 - Initialized MIT campus-wide Family Tea Time
 - Initialized MIT Westgate-Tang Hall outdoor music festival
 - Supported Couples and Partners in Westgate Community
- 2000-06: Software Team Lead and Associate Technical Manager at Quanta Computer
- 1996-97: President of NOCE Student Associate at Tamkang University