Wei Guo

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Objective: To apply for a full-time position in 2019 in the field of Machine Learning / HCI

Education

University of Pittsburgh   Pittsburgh, PA

Ph.D. Computer Science, anticipated graduation in May 2019   GPA: 3.79

University of Pittsburgh   Pittsburgh, PA

Bachelor of Science, Information Science, graduated in Dec 2013   GPA: 3.84

Research Interests

Machine Learning (Deep Learning)
Human Computer Interaction (Intelligent Interfaces & Deep Education)

Internship

Google Company, software engineer   Los Angeles, CA   May 2018 - Aug 2018
- End-to-end designing, implementing, and serving BrandLift measurement--surveys on mobile web large banners and interstitial vignettes.
- Analyzing survey responses and directing future changes on appearance, machine learning model features, and bidding prices.

Google Company, software engineer   Kirkland, WA   May 2017 - Aug 2017
- Exploring the machine learning models for click conversion rate perditions of ads
- Designing new evaluation metrics for click conversion rate predictions of ads

William Pitt Union, student affairs IT internship   Pittsburgh, PA   Aug 2013 - Dec 2013
- Web development

China National Electric Apparatus Research Institution, Oracle Database line-up
                        Guangzhou, China   May 2012 - Jul 2012
- Assisted consultant for secondary development: write financial statement in SQL

Research Experiences

University of Pittsburgh, Pittsburgh, PA   2014 - Now
Graduate Student Researcher, Department of Computer Science   Mentor: Jingtao Wang

Systematically explore the usage of implicit behavioral signals and physiological signals collected via a "sensorless" and low-cost approach to understand, mobile and improve mobile reading.

- **SmartRSVP**: an attentive speed-reading system to facilitate text reading on small-screen wearable devices.
  - SmartRSVP uses camera-based facial alignment and eye-gaze tracking techniques to determine a user's visual attention and then to play/pause the presentation of dynamic texts (text presentation via Rapid Serial Visual Presentation); SmartRSVP uses heart-rate viability features to infer the user's cognitive workload, which is further used to regulate the speed of dynamic texts in real time.

- **Lepton**: an intelligent mobile reading system and a set of dual=channel sensing algorithms to achieve scalable and fine-grained understanding of users' reading behaviors, comprehension, and engagements on unmodified smartphones.
  - Lepton tracks the periodic lateral patterns, i.e. saccade, of users' eye gaze via the front camera, and infers their muscle stiffness during text scrolling via a Mass-Spring-Damper based kinematic model from touch events. Lepton leverages signals from the two channels to infer users' comprehension and engagements during reading.

- **StrategicReading**: automating the understanding of online reading strategic processes by behavior sensing. (Ongoing)
  - StrategicReading leverages features extracted from users' gaze movement, clicking/scrolling behaviors, browsing histories to automate the detection of online reading strategic processes, including information location, source evaluation and meaning making.

Publications

Guo, Wei and Jingtao Wang. "Towards Attentive Speed Reading on Small Screen Wearable Devices." Proceedings of the 20th ACM on International conference on multimodal interaction. ACM, 2018.

Guo, Wei and Jingtao Wang. "Understanding Mobile Reading via Camera Based Gaze Tracking and Kinematic Touch Modeling." Proceedings of the 20th ACM on International conference on multimodal interaction. ACM, 2018.

Guo, Wei and Jingtao Wang. "SmartRSVP: Facilitating Attentive Speed Reading on Small Screen Wearable Devices." Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems. ACM, 2017.

Chang, Shi-Kuo, **Wei Guo**, Duncan Yung, ZiNan Zhang, HaoRan Zhang, and WenBin You. "A Mobile TDR System for Smart Phones." (2017): 75-85.

Chang, Shi-Kuo, JunHui Chen, **Wei Guo**, and Qui Zhang. "TDR System-A Multi-Level Slow Intelligence System for Personal Health Care." In SEKE, pp. 183-190. 2016.

Skills

Proficient in: Java; C++; Flume; HTML; SQL; Drupal

Others: Fluent Mandarin Chinese and English

Honors & Awards

SUMMA CUM LAUDE of Bachelor Degree
2nd place CS Day Research Competition, University of Pittsburgh 03/2017
ACM ICMI 2018 Student Travel Award