Camellia ZAKARIA(PhD)
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EDUCATION

AUGUST 2014-JULY 2019
Doctorate (PhD) in Information Systems
School of Information Systems, Singapore Management University

AUGUST 2009-JULY 2013
Bachelor's in Science (Information Systems)
School of Information Systems, Singapore Management University
Awards:
Final year project – Best User Experience Award
Final year project – Best Project Management Award

APRIL 2004-2007
Diploma in Internet Computing with Merit
School of Informatics, Temasek Polytechnic
Awards:
Final Year Project – Best Project 2007
Honor's List AY 2006-2007
Director's List AY 2005-2006

PROFESSIONAL EXPERIENCE

OCTOBER 2020 – OCTOBER 2022 (future appointment)
Appointment: Postdoctoral Research Fellow
University of Massachusetts Amherst

JUNE 2020 – OCTOBER 2020
Appointment: Postdoctoral Research Fellow
Singapore University of Technology & Design
Reason for Leave: Local temporary contract
Job Responsibilities: Funded under the EMBRACE project, centered on healthy and safe living for the older population. I work with a team of researchers to develop wearable-sensing applications to assist users in getting the help they need for day-to-day concerns.

SEPTEMBER 2019 – APRIL 2020
Appointment: Postdoctoral Research Fellow
School of Information Systems, Singapore Management University
Reason for Leave: To seek career growth
Job Responsibilities: Conduct multiple mixed-method studies to identify trends or patterns of behavior indicative of individuals under severe stress and depression. This includes analyzing longitudinal data using standard statistical software (SPSS) and applying machine learning techniques to build detection models for a health monitoring system (R, Python).

JULY 2013–2014
Appointment: Research Engineer
School of Information Systems, Singapore Management University
Reason for Leave: To continue graduate studies

Job Responsibilities: Joined K-Sketch research project team. My primary role was to develop and maintain a web and mobile sketch application for novices. I was also involved in running user studies and research publications for K-Sketch.

AUGUST 2007–2009
Appointment: Research Officer
Institute for Infocomm Research, A*Star
Reason for Leave: To continue undergraduate studies
Job Responsibilities: Joined the Personal 3D Entertainment System (P3DES) research team. I was specifically hired as the program's Digital Artist for 3D content development – model, program, animate and render characters and props for game environments. In 2008, the Computer Graphics department set up a CGI Content Lab to house student interns/artists, as part of the Digital Media initiative. Accordingly, I took up the role of a Lab Coordinator, and worked on stereoscopic imageries for short animation films.

INTERNSHIP

JULY 2016
Appointment: Visiting Scholar
Heinz College of Information Systems and Public Policy, Carnegie Mellon University
Under the supervision of Dr. Jennifer Mankoff, I worked on a field-ready detection problem of eating behavior using a smart watch, Watch-ya-doin. Watch-ya-doin is an innovative experience based sampling framework with low battery consumption, allowing for data collection over longitudinal studies.

JUNE 2012
Appointment: Research Assistant
Living Analytics Research Centre, Singapore Management University
My work involved building an agent-based simulation model for Universal Studios Singapore. My main responsibility was to build a customized simulator to predict human behavior and support the team in data collection.

JUNE 2011
Appointment: IT Analyst
Bank of Singapore Limited, Singapore
Developed custom web parts for company website using SharePoint, and produced technical documentations for auditing purposes

SUMMER 2006
Game Developer
Canberra Primary School, Singapore
Designed a 3D educational game for Primary 2 and 3 students to learn English and Mathematics in a cooperative learning environment. My main responsibilities include producing game and level designs, modeling of environment props and characters, and animation.

PUBLICATIONS

Zakaria, C., Balan, R., & Lee, Y. (2019). StressMon: Scalable Detection of Perceived Stress and Depression Using Passive Sensing of Changes in Work Routines and Group Interactions. Proceedings of the ACM on Human-Computer Interaction, 3(CSCW), 37.

Roy, Q., Zakaria, C., Perrault, S., Nancel, M., Kim, W., Misra, A., & Cockburn, A. (2019). A Comparative Study of Pointing Techniques for Eyewear Using a Simulated Pedestrian

Environment. In Proceedings of the 17th IFIP TC.13 International Conference on Human-Computer Interaction (INTERACT 2019).

Zakaria, C., Davis, R. C., & Walker, Z. (2016). Seeking independent management of problem behavior: A proof-of-concept study with children and their teachers. In Proceedings of the The 15th International Conference on Interaction Design and Children (pp. 196-205). ACM.

Zakaria, C., Lee, Y., & Balan, R. (2019). Passive Detection of Perceived Stress Using Location-driven Sensing Technologies at Scale. In Proceedings of the 17th Annual International Conference on Mobile Systems, Applications, and Services (pp. 667-668). ACM.

Zakaria, C., Goh, K., Lee, Y., & Balan, R. (2019). Exploratory Analysis of Individuals' Mobility Patterns and Experienced Conflicts in Workgroups. In Proceedings of the 5th ACM Workshop on Mobile Systems for Computational Social Science (pp. 27-31). ACM.
Jayarajah, K., Radhakrishnan, M., & Zakaria, C. (2016). Duplicate issue detection for the Android open source project. In Proceedings of the 5th International Workshop on Software Mining (pp. 24-31). ACM.

Zakaria, C., & Davis, R. C. (2016). Wearable Application to Manage Problem Behavior in Children with Neurodevelopmental Disorders (MobiSys'16)

Davis, R. C., & Zakaria, C. (2014). K-Sketch: Digital Storytelling with Animation Sketches. In Interactive Storytelling (pp. 242-245). Springer International Publishing.

RESEARCH PROJECTS

2017–2019

StressMON

StressMon is an interdisciplinary research piece in the social science domain, aimed at providing a system to detect stress and depression levels from the changes in individual's routines and group interaction habits. Using state-of-the art technologies, StressMon is developed to be accurate, easy to deploy, and scalable for community-wide sensing. StressMon achieves these goals by solely utilizing location data collected from the Wi-Fi infrastructure of an enclosed environment. Thus, it does not require any active client participation and can work completely passive in locations with a deployed localization solution.

2015–2016

WatchME: Wearable to Manage Problem Behaviors

WatchMe is a proof-of-concept prototype that helps children manage problem behaviors by sending customized notifications to their watch when behaviors occur. The ability for children to manage their behaviors helps reduce burdens on caregivers and gives children greater independence. Design of the system was a brainstorm among teachers and parents.

2013–2016

K-Sketch: animation made easy

K-Sketch gives novice animators an easy way to tell stories with animation sketches. It relies on users’ intuitive sense of space and time and makes animation easy through the use of sketching and demonstration.

ORGANIZATIONS

UbiComp 2018
Served as Co-Chair of the Student Volunteer Program
http://ubicomp.org/ubicomp2018/organizing_committee.html

SIGGRAPH Asia 2012
Served as Co-Chair of the Student Volunteer Program
http://www.siggraph.org/asia2012/siggraph-asia-2012-committee

Singapore ACM SIGGRAPH Association
Served as Secretary from 2010 to 2013

SKILLS

- Applied Machine Learning
- Statistical Analysis
- Database Management
- Mobile and Web Development
- HCI Research / User Studies
- Quantitative and Qualitative
- Written/Verbal/Presentation Skills
- 3D Development

REFERENCES

Dr. Rajesh BALAN
Associate Professor (PhD Advisor)
School of Information Systems,
Singapore Management University
Email: rajesh@smu.edu.sg

Dr. Zachary WALKER
Associate Professor (Collaborator)
Institute of Education, University College London
Email: zachary.walker@ucl.ac.uk

Dr. Youngki LEE
Assistant Professor (PhD Advisor)
School of Engineering, Seoul National University
Email: youngkilee@snu.ac.kr