

MACIEJ KOS

Web: mkos.pl / E-Mail: maciejkos@gmail.com / City: Boston, MA

SUMMARY

Data scientist and user researcher with a strong background in behavioral sciences and health informatics. Improves products by providing data-informed insights about user behavior. Works well in diverse teams on time-sensitive projects. Effectively solves meaningful problems using mixed methods.

EDUCATION

Northeastern University , Boston, MA Ph.D. in Computer Science / Personal Health Informatics (GPA: 4.0)	09/2015 – present
University of Michigan , Ann Arbor, MI Master of Arts in Information Science (behavioral research)	12/2012
Barcelona Graduate School of Economics , Barcelona, Spain Master of Science in Economics of Science and Innovation	06/2009
University of Gdansk , Sopot, Poland Bachelor and Master of Arts in Economics and E-business	06/2005

RELEVANT EXPERIENCE

Research Assistant at Khoury College of Computer Sciences, Northeastern University, Boston, MA	09/2015 – present
UX Research Intern (Quantitative) at Google, Material Design, San Francisco, CA	05/2019 – 09/2019
Research Intern (Clinical Data Analytics) at Philips Healthcare Research, Cambridge, MA	05/2018 – 09/2018
Investigator / Research Group Manager , Research Grant: Genetic health risk information avoidance, Sopot, Poland & Boston, MA	07/2013 – 05/2018
User Experience and Research Consultant at Agile Axons (self-employed), Gdynia, Poland and Rome, Italy	01/2013 – 08/2015
Graduate Research Assistant at the School of Information, University of Michigan, Ann Arbor, MI	08/2009 – 01/2012

SKILLS

Programming languages: Python, R
Machine Learning: PCA, factor analysis, clustering, SVMs, ridge regression, logistic classification, random forests
Statistics: GLM (univariate, multivariate, some multilevel), SEM, psychometric modeling
Qualitative methods: focus groups, interviews, usability studies, card sorting
Other: data visualization, network analysis, UX research, sensors (PPG, LIDAR)
Eager to learn: computer vision, deep learning, NLP

SELECTED AWARDS

ACM/Intel Corporation Computational and Data Sciences Fellowship, 2017 – 2020
Northeastern University Dissertation Grant, 2020
Google Scholar, 2020
Grace Hopper Conference, 2019 – Google Travel Award
Disability:IN, 2017 - NextGen Leader Award
Polish National Science Center research grant (\$77 000), 2013 - 2016

SELECTED PROJECTS (HCI/UX AND DATA SCIENCE)

Google Material Design: developed an **algorithm** for computing website's **cognitive** complexity, prototyped **analytics** pipeline to parse 400 billion pages and fuse Google's diverse signals about each website

Contraception Aid: develops a [mobile app](#) to help low-income Latinas select affordable birth control options that are consistent with their fertility goals (with Harvard Boston Children's Hospital)

Philips Healthcare: [analyzed](#) clinical data, prototyped [UX](#) and system architecture for two integrated monitoring and decision-support systems for intensive care units

Child Aid: as a volunteer on large-scale experimental intervention to increase literacy of Guatemalan children [analyzed](#) data and consulted on research design

Strengthening Human Adaptive Reasoning and Problem-solving: [analyzed](#), [visualized](#), and [modeled](#) players progress through a computer game designed to improve their fluid intelligence; identified game components responsible for improvements in cognitive function (with Harvard, Oxford, and HoneyWell)

Digital Breeze: led the [UX](#) team in designing a consumer-facing mobile application for a large Italian telco (with Ericsson, McKinsey, and Monk Software)

WearTech: helped develop and evaluate a cutting-edge [algorithm](#) for improving the accuracy of heart rate variability estimates from wearable devices

Lives of Dissidents: helped launch a charity project dedicated to spreading the message of peaceful dissent as a means of dissolving oppression; as a [UX](#) designer / researcher designed information architecture, conducted usability studies and card sorting sessions

SELECTED PAPERS, PRESENTATIONS, AND POSTERS

1. **Kos M.**, Yew J. (2019) *Computational methods for understanding cognitive density preferences; foundations for adaptive user interfaces*, Google Ph.D. Intern Research Conference, Mountain View, CA
2. Khaghani-Far, I., Li, X., **Kos, M.**, Gordon, C. M., Williams, H., Pavel, M., & Jimison, H. B. (2019). *NUCoach: A Customizable Coaching Platform for Designing Rehabilitation Mobile Apps*. *Archives of Physical Medicine and Rehabilitation*, 100(7), e2.
3. **Kos M.**, Pavel M., Jimison H. (2019). *How to Validate Heart Rate Monitoring Wearables for Just-in-Time Adaptive Health Interventions? Development of Comparison Testing Guidelines*. Poster presentation at the Annual American Medical Informatics Association Symposium, Washington, DC
4. **Kos M.**, Ponnada A., Pavel M., Intille S. (2019). *Evidence That Microinteraction Ecological Momentary Assessment (μ EMA) is a Non-Reactive In-Situ Affect Assessment Method*. Poster presentation at the Society for Affective Science Annual Conference in Boston, MA
5. Rampersad S., Orhan K., **Kos M.**, Mansfield K., Marghi Y. M., Sheffield J., Dillard M., Erdogmus D., Pascual-Leone A., Yeung N., Mathan S., Cohen K. R., Pavel M. (2018). *Effects of EEG-Based Closed-Loop Transcranial Alternating Current Stimulation on Theta Power during a Cognitive Task*. Poster presentation at the 40th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Hawaii
6. **Kos M.**, Gordon C., Li X., Khaghani-Far I., Pavel M., Jimison H. (2017). *The Accuracy of Monitoring Stress from Wearable Devices*. Poster presentation at the Annual American Medical Informatics Association Symposium, Washington, DC
7. **Kos M.**, Li X., Khaghani-Far I., Gordon C., Pavel M., Jimison H. (2017). *Can accelerometry data improve estimates of heart rate variability from wrist PPG sensors?* Paper presentation at the 39th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, South Korea
8. McKanna J., **Kos M.**, Plessow F., Dillard M., Almquist J., Kimball G., Myers E., Orhan U., Rampersad S., Marghi Y., Cornhill D., Brem A., Mansfield K., Yeung N., Thompson T., Santarneckchi E., Erdogmus E., Pascual-Leone A., Kadosh C. R., Mathan S., Pavel M. (2017). *Components of cognition: identifying contributors to learning speed in a game training intervention*. Poster presentation at xTech, San Francisco

Complete list of publications available at: mkos.pl/publications.html