

C u r r i c u l u m

V i t a e

Rafał Kocielnik

PERSONAL DETAILS

Place of birth: Warsaw, Poland
Place of residence: Seattle, WA
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INTERESTS

Smart technologies for Persuasion and Behavior Change; Data science and Machine learning; Conversational AI; Crowd-sourcing; Affective Computing; Natural Language Processing

SKILLS

Data Science Statistical Analysis, Machine Learning and Natural Language Processing with SPSS, R and Python using Pandas, Jupyter Notebook, Scikit-learn and NLTK.

Programming Python, PHP, JavaScript, Java, C++

UX & Design Prototyping in Sketch, InVision; Design in Photoshop, Illustrator; Experience in Interviewing, Observations, Workshop Organization and Usability Testing

Physical Computing Arduino, Raspberry PI, MS Kinect, Motion sensors, XBee based networking, Wearable biosignal sensors

PROFESSIONAL EXPERIENCE

06.2016 – 09.2016 **Research & Development Intern**
Microsoft Research FUSE Labs, Redmond - worked closely in a team of developers, researchers and designers on an applied research project developing conversational AI for meeting scheduling. The project involved applying technologies such as crowd sourcing, bots and NLP in production-quality software. The internship resulted in 2 patent applications, a paper on CHI, and an implementation in C# and Azure Cloud that went to production.

10.2014 – present **Graduate Research Assistant**
Human Centered Design & Engineering, University of Washington - currently working on 3 research projects: 1) exploring the design and value of conversational agents for reflection in Personal Informatics systems; 2) alleviating the annoyance and boredom from repeated message exposure: designing engaging behavior change triggers; 3) sensor based physical-space analytics for local businesses with a goal of helping local business owners understand behavior of their clients.

10.2011 – 10.2014 **Researcher & Developer**
TU/e, EIT ICT Labs, Philips Research – projects related to stress management, burnout prevention, and on-line exercise recommendations. Achievements: 1) designed and developed a stress coaching application used in schools and companies in the Netherlands; 2) developed an on-line recommender service for an on-line exercise platform; 3) carried out field experiments with external clients; 4) developed a published signal processing algorithm for stress level estimation from sensor data; 5) wrote reports that secured an increasing financing for the project for more than 3 years.

01.2011 – 10.2011 **Research Intern**
Philips Research, EIT ICT Labs – pilot project for stress management at work: Stress@Work. Achievements: 1) designed and executed a two month field trial using Philips Research prototype measurement device; 2) created a concept and designed an application for stress management at work; 3) developed and evaluated a demo version of this application.

- 05.2010 – 12.2010 **Design Researcher**
Industrial Design, Biomedical Engineering TU/e – Achievements: 1) connected a medical research application with a 3D optical tracker to enable tangible manipulation of visualization of brain white matter data; 2) evaluated the tangible prototype with medical professionals.
- 02.2009 – 09.2009 **IT consultant**
Technical agency in Warsaw, Poland – Responsibilities: 1) maintenance of computer equipment; 2) development of short quick-fix programs; 3) setting up a network infrastructure; 4) providing help with solving usability problems
- 07.2005 – 09.2005 **Programmer**
Insipiens in Warsaw, Poland – Achievements: developed a media content management system for use across multiple company machines.

EDUCATION

- 09.2014 – present **PhD student**
Human Centered Design & Engineering (HCDE) - University of Washington Seattle, USA - Conversational Agents in Personal Informatics, Persuasive Technologies for Behavior Change: Designing Engaging Triggers for Mobile and Web. Sensor based physical-space analytics for local businesses.
- 10.2009 – 10.2011 **Professional Doctorate in Engineering (PDEng)**
User System Interaction - Eindhoven University of Technology (TU/e) Eindhoven, The Netherlands - Stress Measurement and Management using Wearable Sensors and Visual Analytics Tools, Tangible Interaction in Medical Domain.
- 10.2006 – 11.2008 **M.Sc. in Computer Science**
Multimedia - Polish-Japanese Institute of Information Technology Warsaw, Poland - Anthropometric Facial Emotion Recognition using Computer Vision, Machine Learning and Anthropometric Face Properties.
- 10.2003 – 10.2006 **B.Sc. in Computer Science**
Game Programming - Polish-Japanese Institute of Information Technology Warsaw, Poland –Developing 3D game engine with flexible scripting support.

JOURNAL & CONFERENCE PEER-REVIEWED PUBLICATIONS

- 2017 Cranshaw, J., Elwany, E., Newman, T., Kocielnik, R., Yu, B., Soni, S., ... & Monroy-Hernández, A. *Calendar. help: Designing a Workflow-Based Scheduling Agent with Humans in the Loop*, CHI 2017 (Acceptance rate: 25%)
- 2017 Kocielnik, R., Hsieh, G. *Send Me a Different Message: Utilizing Cognitive Space to Create Engaging Message Triggers*, CSCW 2017. (Acceptance rate: 35%)
- 2017 Drouhard, M., Chen, NC., Suh J., Kocielnik, R., Pena-Araya, V., Cen K., Zheng X., Aragon, C. *Aeonium: Visual Analytics to Support Collaborative Qualitative Coding*, PacificVis 2017. (Acceptance rate: 29%)
- 2017 Hong, R., Kocielnik, R., Yoo, MJ., Battersby, S., Kim, J., Aragon, C. *Designing Interactive Distance Cartograms to Support Urban Travelers*, PacificVis 2017. (Acceptance rate: 29%)
- 2017 Chen, N.C., Brooks, M., Kocielnik, R., Hong, SR., Smith, J., Lin, S., Qu, Z., Aragon, C. *Lariat: A Visual Analytics Tool for Social Media Researchers to Explore Twitter Datasets*, HICSS 2017. (Acceptance rate: 41%)
- 2016 Hsieh, G., & Kocielnik, R. *You Get Who You Pay for: The Impact of Incentives on Participation Bias*, CSCW 2016. (Best paper award: top 1%, Acceptance rate: 25%)
- 2015 Kocielnik, R. & Sidorova, N. *Personalized Stress Management: Enabling Stress Monitoring with LifelogExplorer*, KI-Künstliche Intelligenz 2015.

- 2013 Ouwerkerk, M., Dandine, P., Bolio, D., Kocielnik, R., Mercurio, J., Huijgen, H., & Westerink, J. *Wireless multi sensor bracelet with discreet feedback*, Wireless Health 2013. (Acceptance rate: 21%)
- 2013 Kocielnik, R., Sidorova, N., Maggi, F. M., Ouwerkerk, M., & Westerink, J. H. *Smart technologies for long-term stress monitoring at work*, Computer-Based Medical Systems (CBMS) 2013. (Acceptance rate: 29%)
- 2013 Kocielnik, R., Maggi, F. M., & Sidorova, N. *Enabling self-reflection with LifelogExplorer: Generating simple views from complex data*, PervasiveHealth 2013. (Acceptance rate: 30%)
- 2013 Bui, V., Verhoeven, R., Lukkien, J., & Kocielnik, R. *A trust evaluation framework for sensor readings in body area sensor networks*, BodyNets 2013. (Acceptance rate: 35%)
- 2012 Bakker, J., Holenderski, L., Kocielnik, R., Pechenizkiy, M., & Sidorova, N. *Stress@work: From measuring stress to its understanding, prediction and handling with personalized coaching*, International Health Informatics Symposium 2012. (Acceptance rate: 18%)
- 2011 Dhillon, B., Banach, P., Kocielnik, R., Emparanza, J. P., Politis, I., Rączewska, A., & Markopoulos, P. *Visual fidelity of video prototypes and user feedback: a case study*, BritishHCI 2011. (Acceptance rate: 31%)
- 2011 Dhillon, B., Kocielnik, R., Politis, I., Swerts, M., & Szostak, D. *Culture and facial expressions: a case study with a speech interface*, INTERACT 2011. (Acceptance rate: 25%)
- 2009 Jarkiewicz, J., Kocielnik, R., & Marasek, K. *Anthropometric Facial Emotion Recognition*, HCII 2009.

WORKSHOP, POSTER & SYMPOSIA PUBLICATIONS

- 2016 Karkar, R., Kocielnik, R., Zhang, X., Fogarty, J., Ioannou, GN., Munson, SA., Zia, J. *Towards a Portable, self-administered critical flicker frequency test*, UbiComp 2016.
- 2016 Chen, NC., Kocielnik, R., Drouhard, M., Peña, V., Suh, J., Cen, K., Zheng, X., Aragon, C. *Challenges of Applying Machine Learning to Qualitative Coding*, Human Centered Machine Learning Workshop at CHI 2016.
- 2016 Kocielnik, R. Hsieh, G. *Utilizing Cognitive Space and Crowds to Create Diverse and Engaging Behavior Change Triggers*, ISRII 8 Scientific Meeting.
- 2014 Kocielnik, R. *LifelogExplorer: A Tool for Visual Exploration of Ambulatory Skin Conductance Measurements in Context*, Measuring Behavior 2014.
- 2012 Kocielnik, R., Pechenizkiy, M., & Sidorova, N. *Stress Analytics in Education*, Educational Data Mining 2012. (Acceptance rate: 46%)

SERVICES & AWARDS

- 2016 Best Paper Award, ACM CSCW Conference
- 2015 Publication Chair of Pervasive Health 2015 conference.
- 2013 Co-organized a workshop on stress measurement techniques at Computer-Based Medical Systems Conference (CBMS).
- 2013 Presentation of the Stress@Work project at MobileWorld 2013 electronics show in Barcelona, Spain.
- 2012 Nominated for the TU/e Design Project Award for the Stress@Work project among other 5 best design projects of 2012.

2012	Presentation of the Stress@Work project at CeBIT 2012 electronics show in Hanover, Germany.
2011	Founding member of ACM SIGCHI local chapter in Poland.
2009	Awarded exchange scholarship at Glyndŵr University in Wales, UK.
2008	Awarded Socrates-Erasmus EU student exchange scholarship for studies at University of Westminster in London.
2007	Awarded science scholarship by The Minister of Higher Education.
2006	Awarded science scholarship by The Polish Telecommunication Foundation.

LANGUAGES

English	Fluent in speaking and writing (TOEFL score: 117/120)
Dutch	Basic in speaking, intermediate in reading and writing (level B1)
Polish	Fluent; native speaker

INTEREST & EXTRACURRICULAR

Community	Member of UW student union elections committee
Sports	Yoga, Bouldering, Cardio Kickboxing
Other	Japanese Culture, Preparing Sushi, Traveling