Nediyana Daskalova - Senior Researcher, AI & HCI

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Summary: Skilled mixed-method UX and HCI/AI researcher with a PhD in Human-Computer Interaction and 7+ years of experience in navigating complex challenges at Spotify, Instagram, Microsoft, and Yahoo. Excited about exploring human-AI interaction by focusing on qualitative methods including usability studies, surveys, and interviews and applying machine learning techniques.

EDUCATION

PhD, Computer Science (Human-Computer Interaction), Brown University, Providence, RI, 2014 - 2020
Dissertation: *Personalized Systems for Guided and Flexible Self-Experiments*

BA with Honors, Computer Science, Grinnell College, Grinnell, IA, 2010 - 2014

SKILLS

UX Research: Expert in a diverse set of research methods such as interviews, surveys, contextual inquiry, and usability testing. Proficient in **prototyping** (Figma, Protopie, Sketch) and usability tools (usertesting.com, dscout)

Technical: Expert in **generative AI** (prompt engineering, fine-tuning and evaluating large language models), **machine learning, reinforcement learning, Python**, SQL, data mining/visualization

Product: Effective in **cross-functional collaboration and communication** with engineers, data scientists, designers, product managers and leadership. Proven ability to translate research into product strategy and actionable insights.

EXPERIENCE

Spotify, Research Scientist, since 07/2020 (managers: Jenn Thom, Saw Way)
- Conducted research and developed prototypes to drive strategic generative AI product discovery
- Led and managed 10+ foundational and evaluative mixed-methods studies focused on the understanding of users' interactions and needs, leading to changes to KRs and product roadmaps
- Delivered 15+ LLM-powered user-facing **interactive Figma prototypes** in collaboration with designers, product managers and directors to test out implementation feasibility. This directly informed the vision and product roadmap of Spotify's AI DJ (available to millions of users in 50 markets, accounting for a third of their listening time)
- Embedded with 3 different product teams and effectively brought direction clarity through research in a fast-changing and ambiguous environment
- Designed UX-centric methods for human-in-the-loop[3] data collection and pipelines for training recommender systems. Some of these insights were built into the GoalPods system[2] for enabling podcast discovery

Brown University, PhD researcher, 2014-2020 (advisor: Jeff Huang)
- Designed and developed two reinforcement-learning-based systems (Self-E and SleepBandits), which automatically collected data from the built-in smartphone sensors and leveraged a multi-armed bandit algorithm to give users actionable insights about their sleep and well-being. Conducted end-to-end research to create and evaluate them.

Instagram, UX Research Intern, 2018 (mentor: Sebastian Fite)
- Designed and executed in-lab usability studies, diary studies, and online surveys focusing on discovery
- Collaborated with data scientists, designers, and product managers, and delivered insights and recommendations, leading to substantial strategy shifts for the Search and the Explore Feed

Microsoft, Research Intern, 2017 (mentor: Kay Hofmeester)
- Collaborated with a team of designers to deliver new design prototypes every 2 weeks
- Analyzed 40 million Microsoft Band sleep records to identify user cohorts using a nearest neighbor search in k-dimensional space, and built a system to generate personalized sleep recommendations

Yahoo, UX Research Intern, 2016 (mentor: Frank Bentley)
- Influenced immediate product design and informed the the strategic direction for future Yahoo Mail feature release by employing **mixed-methods research** (in-lab user studies, diary studies, and online surveys) to elicit user feedback

SELECTED PUBLICATIONS AND PRESS

1. TastePaths: Enabling deeper exploration and understanding of personal preferences in recommender systems. Intelligent User Interfaces (IUI) 2022. [Spotify blog]
2. GoalPods:Enabling Goal-Focused Exploration of Podcasts in Interactive Recommender Systems. IUI 2023. [Spotify]
3. User-Centric Design Methods for Reinforcement Learning. RL4HCI Workshop, CHI 2021
4. SleepBandits: Guided Flexible Self-Experiments for Sleep. CHI 2020
5. If a person is emailing you, it just doesn't make sense: Exploring Changing Consumer Behaviors in Email. CHI 2017