



BOGDANA RAKOVA

technology, innovation, global impact



+1 (423) 255-7936



b.rakova@gmail.com



bobirakova.com

Responsible AI expert with a decade of research and technical experience in industry, working with cross-functional teams to drive exceptional value.

EXPERIENCE

RESPONSIBLE AI EXPERT

Senior Trustworthy AI Fellow, Mozilla Foundation

March, 2022 - March, 2024

Led end-to-end research projects and global collaborations that provide novel generative AI evaluation methods, transparency artifacts, new models for legal innovation, and socio-technical research on consent and contestability mechanisms that center ethics, equity, and safety. Participated in top-tier academic conferences and contributed to Mozilla Foundation's thought leadership.

Research Manager, Responsible AI, Accenture

March, 2019 - March, 2022

A technical lead within the global Responsible AI team. Created technical roadmaps across product and research teams, conducted studies and experiments, developed an AI impact assessment framework and tools to enable our industry clients to operationalize fairness, accountability, and transparency of AI-enabled systems, contributing to just and equitable futures.

DEEP TECHNICAL EXPERTISE

Senior Machine Learning Research Engineer, Samsung Research America

Dec, 2014 - Feb, 2019

Led end-to-end applied ML and HCI research as part of an interdisciplinary innovation team. Worked on rapid prototyping and experimentation to create new sensory experiences utilizing machine learning, statistical modeling, signal processing, explainability, interoperability, and safety in the context of ML products.

Co-founder and CTO, HutGrip - Future of Work Technology Startup

Sept, 2012 - April, 2014

Built and deployed machine learning models to empower manufacturing workers to monitor and predict failures. Worked with clients across multiple industries.

STRONG SOCIO-TECHNICAL EXPERTISE

Research Fellow, Partnership on AI

Dec, 2019 - Dec, 2020

Led qualitative research that proposed strategies for maturing Responsible AI organizational capacity within companies building or using third-party ML models.

IEEE P7010 Standard Working Group

Dec, 2018 - Dec, 2020

Core part of the Recommended Practice Standard for Assessing the Impact of Autonomous and Intelligent Systems on Human Well-being. Brought together policy and technical innovation. Developed scenarios for how organizations and governments could implement the standard.

Lead Editor, Springer: Intersections of AI and Community Well-being

Dec, 2018 - Dec, 2020

Co-authored two research articles and coordinated the editorial and peer review process for a Special Issue of the Springer journal.

SKILLS

- Excellent communication, project management, and multi-stakeholder engagement skills.
- **Research** — Responsible AI, STS, Large Language Models, Evaluations, Interaction Design, Trust and Safety, AI literacy
- **Programming Languages** — Python, C/C++, Java, JavaScript, HTML
- **Rapid Prototyping** — using emerging generative AI models, prompt engineering, web frameworks
- **Data Science and Machine Learning** — statistics, data management, data cleaning and processing, data visualization, experiment design, hypothesis testing, feature engineering, algorithms and techniques for building ML models

AWARDS

- **Kaggle Task competition winner (2019)** — for my work on investigating the ethical and social science considerations of COVID 19 crisis response efforts. I developed a grammar-based NLP clustering algorithm using the Tensorflow's Universal Sentence Encoder model.
- **Microsoft Imagine Cup (2011)** — global finalist in the biggest Microsoft student technology competition with a game about environmental sustainability. The project qualified in the top five in the world in the Game Design category.

SOCIO-TECHNICAL RESPONSIBLE AI SYSTEMS THAT EMPOWER LEADERSHIP

— technology, innovation, global impact —

EDUCATION

Harvard Kennedy School Executive Program, Boston - Leading Successful Programs: Using Evidence to Assess Effectiveness
May, 2020

Gained an in-depth understanding of the connection between AI evaluations and policy impact evaluations—including their design, process, and a wide range of methods for measuring effectiveness.

Harvard Berkman Klein Center & MIT Media Lab - Assembly: Ethics and Governance of AI, Boston - Spring semester
Jan, 2018 - May, 2018

Engaged with experts on investigating fundamental legal, policy, and regulatory challenges and risks of AI-driven socio-technical systems.

Graduate Studies Program, Singularity University, Mountain View, CA
2012 - 2014

Fast paced innovation program that allowed me to focus on AI and robotics, learning from top researchers and building prototypes to deliver high-impact business applications.

Bachelor of Computer Science, Sofia University St. Kliment Ohridski, Sofia, Bulgaria
2008 - 2012

I specialized in mathematics, algorithms, and machine learning, gaining an in-depth understanding of the theoretical foundations and design of ML models and complex AI systems.

SELECTED ACADEMIC PUBLICATIONS

- **Rakova, B., Shelby, R., & Ma, M. (2023).** Terms-we-Serve-with: Five dimensions for anticipating and repairing algorithmic harm. **Big Data & Society.**
- **Rakova, B., & Dobbe, R. (2023).** Algorithms as social-ecological-technological systems: an environmental justice lens on algorithmic audits. ACM **FAccT '23: 2023 ACM Conference on Fairness, Accountability, and Transparency.**
- **Havrda, M. & Rakova, B., (2020).** Enhanced well-being assessment as basis for the practical implementation of ethical and rights-based normative principles for AI. In the Proceedings of 2020 **IEEE** International Conference on Systems, Man and Cybernetics (SMC).
- **Rakova, B., Yang, J., Cramer, H., & Chowdhury, R., (2020).** Where Responsible AI meets Reality: Practitioner Perspectives on Enablers for shifting Organizational Practices. In the Proceedings of the 23rd ACM Conference on Computer-Supported Cooperative Work and Social Computing **CSCW** 2021.
- **Schiff, D., Rakova, B., Ayesh, A., Fanti, A., & Lennon, M. (2021).** Explaining the Principles to Practices Gap in AI. **IEEE** Technology and Society Magazine, 40(2), 81-94.
- **Musikanski, L., Rakova, B., Bradbury, J. et al. (2020).** Artificial Intelligence and Community Well-being: A Proposal for an Emerging Area of Research. **Springer** International Journal of Community Well-Being.
- **Rakova, B., & Chowdhury, R. (2019).** Human self-determination within algorithmic sociotechnical systems. In the Proceedings of the Human-Centered AI: Trustworthiness of AI Models & Data (HAI) track at **AAAI** Fall Symposium.
- **Rakova, B., & DePalma, N. (2018).** Minority report detection in refugee-authored community-driven journalism using a Restricted Boltzmann Machines approach. In the Proceedings of the AI for Social Good **NeurIPS** 2018 Workshop.

TOP-TIER CONFERENCE WORKSHOPS

- ACM **FAccT** CRAFT Session. 2023. Language Models and Society: Bridging Research and Policy.
- **CHI** Conference on Human Factors in Computing Systems. 2023. Accountability in Algorithmic Systems: From Principles to Practice.
- Human Hybrid AI Conference. 2022. The (eco)systemic challenges in AI. Introducing broader socio-technical and socio-ecological perspectives to the field of Artificial Intelligence.
- ACM **FAccT** Tutorial. 2020. Assessing the intersection of Organizational Structure and ACM FAT* efforts within industry.

PATENTS

- **Electromagnetic Interference Signal Detection.** US20160259432A1 issued 09-11-2018.
- **Identifying Device Associated With Touch Event.** US20160259451A1 issued 10-16-2018.
- **Processing electromagnetic interference signals using machine learning.** US20160261268A1 issued 11-27-2018. and WO2017090945A1 issued 01-06-2017.
- **Optical detection and analysis of internal body tissues.** WO2016117898A1 issued 07-28-2017.

RECENT ARTICLES

- **Stanford Law School** — Engaging on Responsible AI terms: Rewriting the small print of everyday AI systems
- **Berkeley Institute for Data Science: Computational Social Science Forum** — gave a talk about my work and research: A Relational View on Ethics and Technology
- **MIT Sloan Management Review** article Putting Responsible AI Into Practice