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JANA  
JARECKI

## ABOUT ME

Experienced data scientist, with a deep knowledge in complex analyses, a strong publication record in peer-reviewed journals, and global conference presentations. Ph.D. in Computational Cognitive Science, over 7 years statistical and ML data modeling experience.

*Recently, I've predicted Covid-19 digital health device acceptance using Bayesian feature selection + hierarchical Bayesian models in a large Swiss-representative sample. You can read about it [online](#).*

## SKILLSET

General	Statistics, machine learning, computational simulations, experimental design, sample planning, data visualization, data communication
Analyses	Hierarchical Bayes, regression, generalized LMs, machine learning development/training/testing, cross-validation, parallel computing, classification, decision trees
Technical	R, Tidyverse, brms, Stan, Git/Github Shiny, Ggplot, Plotly, Highcharts, Python
Web/Other	JavaScript, HTML/CSS, (R)Markdown, MSOffice, Adobe, LaTeX
Workflow	Agile management, team lead, Scrum, Kanban, Confluence, Basecamp, Freedcamp
Languages	German (native). English (fluent spoken, written)

## ACADEMIC POSITIONS

2016–today	Research Scientist, world's top-100 <i>University of Basel, Switzerland</i>
2015	Computational Scientist, European's top-25 <i>University of Aarhus, Denmark</i>
2012–2016	Predoctoral Scientist, <i>Max-Planck-Institute for Human Development, Germany</i>
2012	Research Scientist, <i>University of Flensburg, Germany</i>

## PORTFOLIO

### SELECTED PROJECTS

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2019–2022 <a href="#">VIEW PROJECT</a>	<i>Improving Customer Preference Models through Cognitive Machine-learning</i> <b>Responsibilities:</b> Scientific lead, cognitive science: preferences: study design, online and offline data collection, 3-person team   <b>Impact:</b> New predictive model of consumer preferences and preferential learning published in <i>Decision</i> , open-source <a href="#">code available</a> , 2 data sets, 4 conference presentations   <b>Methods:</b> Randomized controlled experiment, consumer choice experiment, frequentist statistics, machine-learning modeling, longitudinal data
2020–2021 <a href="#">VIEW PROJECT</a>	<i>Predicting the Use of Digital Health Devices during Covid-19</i> <b>Responsibilities:</b> Scientific lead, cognitive science: cognitive processes in disease perception in a Swiss-representative sample during COVID-19, 4-person team   <b>Impact:</b> <a href="#">Pre-registered</a> hypotheses testing, new predictive model of digital health application usage published in <i>HumSocSciCom</i> ( <a href="#">press release</a> ), open-source <a href="#">code available</a> , 1 open-source <a href="#">data set</a>   <b>Methods:</b> Representative, online survey, Bayesian hierarchical generalized linear modeling, state-of-the-art predictive variable selection
2018–2020 <a href="#">VIEW PROJECT</a>	<i>Open-source Software Package to Model Cognition using Machine-learning</i> <b>Responsibilities:</b> Software development lead and implementation of a data modeling software and a data collection tool   <b>Impact:</b> Two software packages: "R" software on <a href="#">GitHub</a>

published in *CogSci* in use in 7 projects, 3 talks. A web software to facilitate data collection on risk taking used in multiple projects | **Methods:** Object-oriented programming, unit tests, documentation, collaboration in Git/Github

## EDUCATION

PH.D. COMPUTATIONAL COGNITIVE SCIENCE  
Max-Planck-Institute for Human Development &  
HU Berlin | 2017

BS BEHAVIORAL ECONOMICS  
Ludwig-Maximilians-University  
Munich | 2012

MS COGNITIVE PSYCHOLOGY  
Ludwig-Maximilians-University  
Munich | 2012

## WHO AM I?

Coffee lover and foody, love mountaineering/high alpine/glacier tours; I rock climb and boulder, and am also into mindfulness, self-development, also: a big fan of podcasts.

## APPENDIX

### INTERNATIONAL CONFERENCE PRESENTATIONS AND/OR COLLABORATIONS

Aarhus – Basel – Berlin – Birmingham - Budapest - Clarkson, NY – Haifa – Helsinki – Hildesheim – Konstanz – Leiden – London - Madison, WI – Missouri – Montreal – Paris – Potsdam – Quebec – Salzburg – Stellenbosch – Toronto – Uppsala – Vancouver – Vienna – Warwick – Zurich

### SCIENTIFIC PROJECT TRACK RECORD

- |  |  |  |      |
|--|--|--|------|
| 1. Comparing attribute-based and memory-based preferential choice.                           | JB Jarecki, J Rieskamp.                                      | DECISION, 1-26   | 2022 |
| 2. Risk preferences and risk perception affect the acceptance of digital contact tracing.    | R Albrecht, JB Jarecki, DS Meier, J Rieskamp.                | Humanities and Social Sciences Communications 8 (1), 1-9                       | 2021 |
| 3. People are Insensitive to Within-Category Feature Correlations in Categorization.         | FI Seitz, JB Jarecki, J Rieskamp.                            | Proceedings of the 43rd Annual Meeting of the Cognitive Science Society        | 2021 |
| 4. Similarity-based Influences in Judgment and Decision Making.                              | JB Jarecki, JA Hoffmann, H Giese, FI Seitz.                  | Proceedings of the 43rd Annual Meeting of the Cognitive Science Society        | 2021 |
| 5. How goals erase framing effects in risky decision making.                                 | L Marbacher, JB Jarecki, J Rieskamp.                         | Proceedings of the 43rd Annual Meeting of the Cognitive Science Society        | 2021 |
| 6. The influence of sample size on preferences from experience.                              | JC Hoffart, JB Jarecki, G Dutilh, J Rieskamp.                | Quarterly Journal of Experimental Psychology                                   | 2021 |
| 7. Cognitivemodels: An R Package for Formal Cognitive Modeling.                              | JB Jarecki, FI Seitz.  | 18th Annual Meeting of the International Conference on Cognitive Modelling     | 2020 |
| 8. Prospect Theory and Optimal Risky Choices with Goals.                                     | JB Jarecki, J Rieskamp.                                      | Proceedings of the 42nd Annual Conference of the Cognitive Science Society     | 2020 |
| 9. The Relevance of Subjective Benefits in Risky Choice Across ten Domains of Life.          | JB Jarecki, A Wilke.   | Proceedings of the 42nd Annual Conference of the Cognitive Science Society     | 2020 |
| 10. A Framework for Building Cognitive Process Models.                                       | JB Jarecki, JH Tan, MA Jenny.                                | Psychonomic Bulletin & Review 27, 1218–1229                                    | 2020 |
| 11. On the importance of power analyses for cognitive modeling.                              | S Gluth, JB Jarecki.   | Computational Brain & Behavior 2, 266-270                                      | 2019 |
| 12. Into the black box: Tracing information about risks related to 10 evolutionary problems. | JB Jarecki, A Wilke.   | Evolutionary Behavioral Sciences 12, 230-244                                   | 2018 |
| 13. Naïve and Robust: Class-Conditional Independence in Human Classification Learning.       | JB Jarecki, B Meder, JD Nelson.                              | Cognitive Science 42, 4-42   | 2017 |
| 14. Citizen Science, Gamification, and Virtual Reality for Cognitive Research.               | JB Jarecki.  | Proceedings of the 39th Annual Conference of the Cognitive Science Society     | 2017 |
| 15. What is a cognitive process model? A Disambiguation.                                     | J Jarecki, J Tan, M Jenny.                                   | A Disambiguation   | 2015 |
| 16. Moot Point Process Models.   | BC Love, J Jarecki, JR Bussemeyer, NA Taatgen, TL Griffiths. | Proceedings of the Annual Meeting of the 36th Cognitive Science Society        | 2014 |
| 17. The Assumption of Class-conditional Independence in Category Learning..                  | J Jarecki, B Meder, JD Nelson.                               | Proceedings of the 35th Annual Conference of the Cognitive Science Society ... | 2013 |

### DISSERTATION

- Modeling the Decision Making Mind: Does Form Follow Function?. JB Jarecki. Humboldt-Universität zu Berlin

2017

### TALKS AND POSTERS AT INTERNATIONAL SCIENTIFIC CONFERENCES/MEETINGS

1. Jarecki JB. What makes a good theory. Lorentz workshop on theory in psychology, Leiden 2022. Invited talk.
2. Jarecki JB. How to make Framing Effects Disappear. ETH Zurich 2021, Apr 20, Invited talk
3. Jarecki JB Risk-taking with goals. Uppsala University 2020, Nov 23, Invited talk
4. Jarecki JB & Rieskamp J. Prospect Theory and Optimal Risky Choices with Goals, CogSci 2020. Talk
5. Jarecki JB & Wilke A. The Relevance of Subjective Benefits in Risky Choice Across ten Domains of Life, CogSci 2020. Poster
6. Jarecki JB & Seitz F. Cognitivemodels: An R Package for Formal Cognitive Modeling. ICCM 2020. Poster
7. Jarecki JB. Woman in Data Science. Basel Woman in Data Science Day 2019. Invited talk.
8. Jarecki JB. What Drives Differences in Risk-taking Across ten Evolutionary Domains? Clarkson University, NY 2019, Nov 22. Invited talk.

9. Jarecki JB & Rieskamp J. How goals change peoples risk taking behavior. Psychonomics 2019. Montreal. Poster
10. Jarecki, JB. & Rieskamp J. How goals shape human risk taking behavior, TEAP 2019, London. Talk
11. Jarecki JB. New Perspectives on Risk Perception and Choice, Sorbonne, Paris 2019, Nov 13. Invited talk
12. Jarecki JB. Near-optimal risky choices under constraints of time and requirements, University of Birmingham 2019, May 29-30. Invited talk
13. Jarecki, JB & Rieskamp J. Preferences based on similarity comparisons, MathPsych 2018. Madison. Talk
14. Jarecki JB. A new look at risk sensitivity, University of Konstanz 2018, Dec 4. Invited talk
15. Jarecki JB. Preferential choices based on similarity comparisons, Warwick 2018. Behavioral Science Day, May 31. Invited talk
16. Jarecki, JB, Rieskamp, J. A similarity-based account of human preferences, SPUDM26, Haifa, Israel, Aug 20 – 24. Talk
17. Hoffart, JC, Jarecki JB, Rieskamp J. Risk-return belief and the affect heuristicSPUDM26, Haifa, Israel, Aug 20 – 24. Talk
18. Jarecki, JB, Nielsen, TK, Riede, F, Bach, LA, Johannsen, NN, & Lombard, M (2016). Bow hunting facilitates human dispersals in variable environments. Stellenbosch, SA: Palaeo-TrACKS Symposium. Nov 8 – 9. Talk
19. Jarecki JB. Naïve and Robust: Class-Conditional Independence in Human Classification Learning, University of Warwick 2016, June 20. Invited talk.
20. Jarecki, JB, & Wilke, A. (2016). Evolutionary functions shape the construction of risk preferences. The Nature of Preferences and their Relation to Choice. Potsdam, Apr 19 – 20. Talk
21. Jarecki, JB, Wilke, A. Non-compensatory integration of memory cues in evolutionary domains of risky choice, HBES 2016, Vancouver, June 29 – July 2. Talk
22. Jarecki JB. Smartly limited. Exploring how human learning processes (may) outsmart computer optimization. Interacting Minds Centre for the Study of Cognition, Communication and Choice, Aarhus 2015, Mar 24. Invited talk
23. Jarecki, JB, Wilke. A. Risk-attitudes meet process-tracing: Informational cues relate to risk-attitudes in ten different domains, SPUDM25 2015, Budapest, Aug 16 – 20. poster
24. Jarecki, JB, Wilke. A. Informational cues for risk differentiate between risk attitudes in ten evolutionary domains, HBES 2015, Missouri, May 27 – 30. Talk
25. Jarecki, JB, Wilke A. Process Tracing Across Evolutionary Domains: A Novel View on Risky Choice. EHBEA 2015, Helsinki, March 29 – Apr 2. Talk
26. Jarecki, JB, Meder, B., & Nelson, J. D. Naïve Bayes as a default in human category learning. TeaP 2015, Hildesheim, March 8 – 11. Talk
27. Jarecki JB. What is a Cognitive Process Model? A Review and Disambiguation. Interacting Minds Centre for the Study of Cognition, Communication and Choice, Aarhus 2014, Nov 11. Invited talk.
28. Jarecki JB. A Framework for Process Models in Decision Sciences, 7th Annual JDM Workshop for Early Career Researchers. Berlin 2014, July 3. Invited talk
29. Jarecki JB, Tan J.H., Jenny M.A. Conceptualizing process model characteristics. CogSci 2014, Quebec City, July 22 – 26. Talk
30. Jarecki JB, Tan J.H., Jenny M.A. (working paper). Moot Point Process Models. EGPROC 2014, Salzburg, May 1 – 5. Talk
31. Jarecki JB, Meder, B., & Nelson, J. D. The assumption of class-conditional independence in categorization under uncertainty. SJDM 2013, Toronto, Nov 15 – 18. poster
32. Jarecki JB, Meder, B., & Nelson, J. D. (2013). The assumption of class-conditional independence in category learning. CogSci 2013, Berlin, July 31 – Aug 3. poster
33. Jarecki JB, Zehetleitner, M. Can inbreeding explain the motivation to explore? TeaP 2013, Vienna, March 24 – 27. Poster