

Peter Sebastian Riefer

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Professional experiences

09/2016 – present | dunnhumby Ltd, London, UK

Full-time data scientist

- Working with large, unstructured data from global retailers and their suppliers
- Loyalty and long-term value optimisation using reinforcement learning
- Improved personalisation and shopping experience through models of cognition
- Research on the intersection of psychological models of cognition and machine learning

03/2013 – 05/2016 | dunnhumby Ltd, London, UK

Working student as data scientist in collaboration with UCL

- Pioneering work in individual supermarket customer analyses
- Combining cognitive theories of decision-making with big data
- Prediction of exploratory choices for coupon distribution optimisation

03/2011 – 08/2011 | T-Systems GmbH, Darmstadt, Germany

Trainee in Change Management

07/2009 – 08/2009 | Babelsberg Film GmbH, Potsdam, Germany

Trainee in Accounting and Finance

03/2009 – 06/2009 | Council of Europe, Strasbourg, France

Trainee in Production, Distribution and Marketing at the Audiovisual Observatory

Education

09/2012 – 08/2016 | University College London, UK

PhD in Cognitive Psychology on the topic of “Human exploratory decision-making”
(recipient of the UCL IMPACT award)

09/2011 – 08/2012 | University College London, UK

MSc in Cognitive and Decision Sciences

09/2009 – 08/2011 | Zeppelin University Friedrichshafen, Germany

MA in Management & Economics (recipient of the Zeppelin stipend award)

10/2006 – 08/2009 | Ilmenau University of Technology, Germany

BSc in Media Economics

Skills

- Languages: German (mother tongue), English (fluent), French (advanced), Portuguese (beginner and currently learning)
- Programming: Python, SQL, Matlab, HTML and Javascript, PHP, Flash, Java
- Database system experience: Hadoop, Hive and Spark
- Analytical software: R, SAS, SPSS
- Media editing: Adobe Photoshop, Premiere, After Effects
- Outstanding statistical knowledge and teaching skills demonstrated as seminar tutor for statistics at Ilmenau and Zeppelin University, as well as case study designer at UCL
- Experienced in presenting projects and proposals to clients, co-workers and expert audiences as well as general audiences (e.g., at the London Science Museum)
- Excellent organisational skills as demonstrated as member of the organising committee for the Frontiers in Economics and Psychology conference

Invited talks

24/10/2016, City University of London: *Coherency maximizing exploration in the supermarket.*

03/02/2016, Metropolitan University London: *How coherency maximizing exploratory choices can shape preferences for future choices.*

03/02/2015, City University of London: *Coherency maximization versus uncertainty minimization: how people explore subjective choices.*

01/04/2015, University of Stirling: *Exploratory decision-making in the supermarket.*

Publications

Riefer, P.S., & Love, B.C. (in press). *Coherency maximizing exploration in the supermarket.* Nature Human Behaviour.

Riefer, P.S., & Love, B.C. (2015). *Unfazed by Both the Bull and Bear: Strategic Exploration in Dynamic Environments.* Games, 6, 251-261.

Richardson, D. C., Riefer, P. S., Love, B. C., Lotto, B., Clarke, R. C., Dale, R., Rogers, J., Ireland, J. (2013). *Experiments in dynamic group action and decision making: How crowds of people can walk a tightrope together and survive a zombie attack.* Paper presented at the 35th Annual Conference of the Cognitive Science Society. Berlin, Germany.