Catalogue of Outputs from the BAYES-KNOWLEDGE Project

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Abstract

This document lists the BAYES-KNOWLEDGE project outputs according to classification: Published papers (journals); Published papers (book chapters); Published papers (conferences); Submitted papers; Technical Reports (published); Technical Reports (unpublished) including working papers planned to be submitted; Software; Dissemination (including Media, Press releases, posters and online articles)

European Research Council Project ERC-2013-AdG339182-BAYES_KNOWLEDGE
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Published/accepted papers (journals)


Published papers (book chapters)


Published papers (conferences)


Fenton, NE, de Zoete, J (2107), “Modeling complex legal cases as a Bayesian network (BN) using idioms and sensitivity analysis with the Collins case as a complete example”, ICFIS2017 (10th International Conference on Forensic Inference and Statistics), Minneapolis, USA, 6 Sept 2017

de Zoete, J, Fenton, NE (2017), "Automatic Generation of Bayesian networks in Forensic Science", ICFIS2017 (10th International Conference on Forensic Inference and Statistics), Minneapolis, USA, 6 Sept 2017


Constantinou A and Fenton NE. "Improving predictive accuracy using Smart-Data rather than Big-Data: A case study of soccer teams’ evolving performance" In Proceedings of the 13th UAI Bayesian Modeling Applications Workshop (BMAW 2016), 32nd Conference on Uncertainty in Artificial Intelligence (UAI 2016), New York City, USA, June 25-29, 2016


Submitted papers


Technical Reports (published)


Fenton, N. E, "Another machine learning fable", March 2015 DOI: http://dx.doi.org/10.13140/RG.2.1.2506.3849

Fenton, N. E, "Moving from big data and machine learning to smart data and causal modelling: a simple example from consumer research and marketing", March 2015. DOI: http://dx.doi.org/10.13140/RG.2.1.3292.8166
Working papers


Fenton, N E (2017) The Gate Crasher Paradox: does a Bayesian solution help?


Fenton NE, “Bayesian network solution for confidence intervals of classification proportion sampling”, 2016 has associated model

Fenton NE and Archer R, “Using Bayesian networks to debunk claims that probability cannot model legal reasoning”, Working paper 2016 has associated model

Fenton NE, “To focus on winning one competition or try to win more: Using a Bayesian network to help decide the optimum strategy for a football club”, 2016, has associated model


Fenton NE, “Handling Anonymous Witness Evidence using Bayesian Network idioms”, has associated model

Fenton NE, “A Bayesian Network model of a problem of international law” has associated model

Fenton NE, “Bayesian network solution to the problem of Bayesian learning of population mean and variance (normal distribution) from sample mean and variance”, Working paper 2015 has associated model

Fenton NE, Neil M, .. “Hypothesis testing revisited: why the classical approach will almost certainly give the ‘wrong’ results”, Working paper 2015


Fenton NE, Neil M, Hsu A, “When a lower random match probability for a forensic match has exactly the opposite impact to what you would expect” has associated model


Fenton NE, “Witness evidence idiom” 2015 Working paper. has associated model

Fenton NE, “Global Increase in Football Spectator Injuries captured by a Special Hockey Stick”

Fenton NE, “Beyond Likelihood Ratios” AI and Law Presentation, San Diego, California, USA

Fenton NE, “Limitations and opportunities of the likelihood ratio approach for evidence evaluation”, Leiden, Netherlands (ICFIS: 9th International Conference on Forensic Inference and Statistics)

Fenton NE, “Improving Probability and Risk Assessment in the Law” Winchester Conference on Trust, Risk, Information and the Law, Winchester


Fenton, N.E, “A Bayesian Network for a simple example of Drug Economics Decision Making”, 2014 has associated model. Needs to change date to a later date

Fenton, N.E, “Idioms for modelling project risk”, 2014 has associated model.
Software

BAYES-KNOWLEDGE Tool


Online Crime linkage model generation tool (one offender)


Online Crime linkage model generation tool (two offenders)

Dissemination (including Media, Press releases, posters and online articles)


BAYES-KNOWLEDGE blog: http://bayesknowledge.blogspot.co.uk/

Presentation Bayesian Networks and the Law, 07/03/2018 University College London

Media briefing “Evidence based decision making turns knowledge into power” 05/04/2018 EU Research Magazine


Presentation: The benefits and pitfalls of Bayes in forensic analysis, 18/12/2017, Senate House, University of London

Presentation: Modeling complex legal cases as a Bayesian network (BN) using idioms and sensitivity analysis with the Collins case as a complete example 06/09/2017, ICFIS2017 (10th International Conference on Forensic Inference and Statistics) Minneapolis, USA

Presentation: Automatic Generation of Bayesian networks in Forensic Science, 06/09/2017 ICFIS2017 (10th International Conference on Forensic Inference and Statistics), Minneapolis, USA

Presentation: Combining judgments with messy data to build Bayesian Network models for improved intelligence analysis and decision support, 22/08/2017, SPUDM26, The Technion, Haifa, Israel


Presentation A Simple and Practical Solution to the Prior Probability Problem for Legal Cases. International Conference on Artificial Intelligence and the Law , 15/06/2017

Presentation: Probability and Risk, 12/10/2017, Portsmouth Skeptics Society, The Rifle Gallery in Fratton


Presentation: Fallacies of Probability and Risk, 15/03/2017, Logan Hall, London (GCSE Maths in Action Day)

Presentation: Innocent until proven guilty: a fair approach to agreed prior probabilities 15/12/2016, JURIX Conference, Nice, France

Presentation Recommendations and Guidelines for using Probability and Statistics in the Law 01/12/2016, Cambridge (Turing Gateway to Mathematics - Dissemination Workshop)

Presentation: Beyond a reasonable doubt: a Bayesian perspective, 27/10/2016, Groningen University, Netherlands

Press release, Bayesian Networks and Argumentation in Evidence Analysis, 07/10/2016 http://bayesknowledge.blogspot.co.uk/2016/10/bayesian-networks-and-argumentation-in.html
Bayesian networks: challenges and opportunities in the law
Isaac Newton Institute for Mathematical Sciences, Cambridge
27/09/2016

The Challenges of Bayes in the Law
Isaac Newton Institute for Mathematical Sciences, Cambridge
31/08/2016

Bayes Theorem: What's the Big Deal,
The Salvage Cafe Brighton (Brighton Sceptics Society)
22/08/2016

On the benefits and pitfalls of using the likelihood ratio to help understand the impact of forensic evidence,
The Forensic Institute FORREST 2016, Glasgow
05/07/2016

How an expert witness's say-so can make you a murderer,
Norman Fenton interviewed by Linda Geddes in New Scientist
15/06/2016

Improving predictive accuracy using Smart-Data rather than Big-Data: A case study of soccer teams' evolving performance,
New York City (32nd Conference on Uncertainty in Artificial Intelligence)
29/06/2016

A Progressive Explanation of Inference in 'Hybrid' Bayesian Networks for Supporting Clinical Decision Making
8th International Conference on Probabilistic Graphical Models, Lugano, Switzerland
07/09/2016

Smart data – not just big data: Real-world decision making with Bayesian networks.
18/11/2015

What is the value of missing information when assessing decisions that involve actions for intervention?. Atlas Sci. 2015 (see http://tinyurl.com/zv6fyk2)

Climate Change By Numbers
BBC Television
09/03/2015

Quantifying risk in aircraft safety
BBC Radio Scotland
26/03/2015

Probabilistic Analysis (on Punt PI Programme), BBC Radio 4
02/08/2014

Statisticians question evidence used to convict nurse of murdering patients
Guardian Newspaper
15/02/2015

Psychologists Uncover It's the Referees, Not the Players, Who Might Secure Soccer World Cup Victory,
Huffington Post
18/06/2014

Probability and Risk
Winchester Science Festival
26/07/2015

Making Decisions with Less Data
Proctor and Gamble, Brussels, Belgium
26/06/2015

Risk Assessment in Finance using Bayesian Networks,
Government Actuary's Department, London
18/11/2015

Improved Medical Risk Assessment
Department of Surgery and Cancer, Imperial College London
20/05/2014

Probability and Risk (Blog)
http://probabilityandlaw.blogspot.co.uk/
Risk Assessment and Decision Analysis with Bayesian Networks (Blog), http://bayesianrisk.com/

Bayes and the Law (blog and forum), https://sites.google.com/site/bayeslegal/

An Unusual Pattern, 28/03/2016, ABC (Australian Broadcasting Company)

Fallacies of Probability and Risk, 08/12/2015, University of Warwick ("Mathematics in Action Day 2015")

Impediments and Opportunities to using Statistics and Probability in Legal Arguments, 09/02/2016, City University Law School (under auspices of Turing Gateway to Mathematics and Isaac Newton Inst

The prosecutor's fallacy and other errors of legal reasoning, 24/03/2016, Hilton Hotel London (Investigation and Prosecution of Homicide Conference)

Bayesian networks for legal and forensic applications, 23/03/2016, University College London

Smart data - not just big data: real-world decision making with Bayesian networks, 07/03/2016, Houses of Parliament


Why target setting leads to poor decision-making, 09/07/2015, http://bayesknowledge.blogspot.co.uk/2016/01/why-target-setting-leads-to-poor.html

The risk of flying, 25/03/2015, http://bayesknowledge.blogspot.co.uk/2016/01/the-risk-of-flying.html

The Statistics of Climate Change, 26/02/2015,
http://bayesknowledge.blogspot.co.uk/2016/01/the-statistics-of-climate-change.html

Misleading DNA evidence and the current damaged winning lottery ticket story, 28/01/2016
http://bayesknowledge.blogspot.co.uk/2016/01/misleading-dna-evidence-and-current.html

Ben Geen: another possible case of miscarriage of justice and misunderstanding statistics?, 15/11/2014
http://bayesknowledge.blogspot.co.uk/2016/01/ben-geen-another-possible-case-of.html