

TONY NOLAN OAM JP



PERSONAL DETAILS

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AWARDS, ACKNOWLEDGEMENTS & VOLUNTEERING

Who's Who in Science and Engineering 8th edition 2005 – 2018
Who's Who in Australia 2002 – 2018
Who's Who in Business 2002 – 2018
Local Hero Award 2001 (Lane Cove Council)
Order of Australia Medal 2001
Rotary Pride in Workmanship 1999
NSW Police Service – Volunteer in Policing – 20+ years' service
Fellow of Institute of Analytics Professionals of Australia
Lane Cove Council community advisory communities
NSW Fire Brigade – Community Fire Fighter and Data Science Researcher
NSW Police Force – Volunteer in Policing – Data Science Researcher
Royal Society of NSW – Librarian and Treasurer
Australian Institute of Professional Intelligence Officers – Board Member
Institute of Analytical Professionals Australia – Board Member / Foundation Member
Australian Association of Institutional Research – Board Member
IEEE SSIT Australia – Committee Member (Communications)
IEEE Standards Association – Secretary P7006 Ethics of AI Personal Assistants

EDUCATION

Data Mining in the ATO
Graduate Certificate in Management UTS
Cert Grad Statistics (Parametric & non-parametric) UNSW
Cert Grad Action Research USYD
Teradata Introduction
Teradata Data Mining
Data Camp – Python
Hadoop

INNOVATIONS

My Innovations / Invention / Establishments / Research and Development

- Nolan's Language Index– using letters and phonetics for text mining and context analysis
- Nolan's Matrix – Fuzzy Logic 3D matrix to map decision making
- Nolan's Hash – A discrete cosine transformation, used for distance preserving digital fingerprinting
- Nolan's Peer Relativity Transformation – Clustering routine for reshaping based on like groupings
- Nolan's Numeric to Text Visualization – replacing numbers with characters for pattern recognition
- Nolan's Community Safety Audit – Risk scoring index for safety audit survey
- Dendromatrix – TQM style problem solving sequence
- SAHIS & CARVIALE – Decision Visualizations methods using knowledge classifications
- CogKnology – Academic pursuit on the integration of knowledge and cognition in decision making
- Hyperpanometrics - Academic pursuit in developing a universal measurement scale using nth dimensional space
- Hyperpanofiction – A multi directional writing style for storytelling
- SIG – Text Mining / Context Analysis – ATO

- SIG – Geocoding / Geospatial Analysis – ATO
- SIG – Data Visualizations – ATO
- SIG – Behavioural Analysis – ATO
- Management Information & Intelligence Group – UTS
- Proactive Decision Intelligence Group – NSW Police Force

PRESENTATIONS, PERFORMANCES, LECTURES, SEMINARS, MULTIMEDIA

Books

- A Guide to Writing Hyperpanofiction
- Knowledge Pirates Guide to Institutional Research

Pamphlets

- Going Out – NSW Police NSLAC Safety Guide for Senior Citizens
- Stay Safe – NSW Police NSLAC Safety Guide for Senior Citizens

Papers

- An Action Philosophy Model
- Customer Focus - Defining and Involving all Customers in Quality Education
- ProDigy Project Policing Issues and Practice Journal
- Recent Developments in Interactive Problem Solving Techniques for Modelling
- Solving Reshelving Backlogs in a University Library: A Case Study in Interactive Problem-Solving Technique with a TQM Application

Conferences

- A Problem Solving Approach to Stress in the Workplace
- A System of Systems Approach to Analytics Using Nolan's Peer Relativity Profiling Transformations
- Analysis of DEET Data for Funding Models and Student Migration Patterns Using 3 Dimensional Spreadsheet Modelling
- Decision Analysis Through Knowledge, Emotions, Sense Making and Needs Interaction
- Decisions Decisions Decisions- Is There a Common Ground
- Decision Intelligence as a Useful Approach to Modern Management Education
- FORGING NEW FRONTIERS 40th of Fuzzy Pioneers
- Getting Underneath the Decision Making Process
- Going Beyond Social Network Analysis: A Practical Way of Combining GIS, Text Mining, Open Source and Profiling to Generate Intelligence Products
- Intelligence Analysis from an Information Behaviour and Sense Making Approach
- Mapping the Difference
- Mind Uploading - Presenter – International Science Producers Conference
- Modelling and Applications of Multi-Dimensional Interval Data to Artificial Life, Control Systems, Decision Making, etc.
- Project Triage; Methodology for Profiling (behaviour / cause & effect) using a context matrix built through the integration of both characteristics and key performance indicators to create a profile sequence for a search structure within data mining and analytics
- Reengineering Knowledge Management in Experiential Learning Environments
- Reflecting Forward
- SAHIS: Simulated Artificial Hybrid Intelligent System
- SoSEdata3D: A Process for Mapping System of Systems Data in 3D
- The Internet as a Research Tool for Gifted Students: Implications for Teachers and Families
- Towards a Design for a Virtual Reality Model for Work-Experience Learning

- To Decide or Not to Decide, What was the Question?
- Transdisciplinary Approach to Strategic Profiling
- Using Decision Intelligence Activities for Management & Marketing Analysis for Decision Support
- Using Nth Dimensional Fuzzy Logic for Complexity Analysis, Decision Analysis and Autonomous Control Systems
- War Gaming Sense Making; Behavioural Analysis of the Decision Making in Gaming

Presentations

- Artificial Intelligence, Robotics and Advanced Soft Computing
- Artificial Life Forms – Rights and Responsibilities
- Design and Presentation of Data in Reporting
- Management Information and Intelligence Project
- Parenting the Internet, a Guide for Parents of Primary School Children
- Using Open Source for Intelligence Focused Activities
- Using DNA Profiling Techniques for Big Data Analysis
- When Science Fiction Becomes Science Fiction
- ATO Analytics Community of Practise
- Behaviour Analysis
- Big Data
- D3
- Decision Making
- Digital Fingerprinting
- Fuzzy Logic
- Geocoding
- Illicit Tobacco Models
- Network Analysis (E-Tax)
- Nolan's Transformation
- Open Source Software
- Open Sources Datasets
- Profiling
- R
- Rattle
- Social Networking Analysis
- Statistics
- Survey Analysis
- System of Systems
- Text Mining
- Visualisations

CURRENT EMPLOYMENT: AUSTRALIAN TAXATION OFFICE, AUSTRALIAN FINANCIAL SECURITIES AUTHORITY, & NSW POLICE FORCE (VOLUNTEER IN POLICING)

AFSA:

Senior Intelligence Analyst (Strategic) March 2019 – June 2019. Section 26 transfer.

ATO:

Data Scientist (Smarter Data 2015+)

Chairperson Analytics Community of Practise 2016 – 2019, Presenter 2008 - 2019

Member of the organising team Data Analytics Centre of Excellence (Commonwealth Government)

Innovation Officer (PG&I 2013 – 2015)

Research and Development Analyst (Risk, Intelligence and Analytics) 2007 – 2013

Strategic Intelligence Analyst May 2003 – 2007 (SNC, ATP, Excise)

Acting Team Leader SNC Tactical Intelligence Sydney (9 months)

Acting Team Leader TIG Intelligence Sydney (1 month)

PREVIOUS EMPLOYMENT: UNIVERSITY OF TECHNOLOGY, SYDNEY

Renamed Information & Intelligence Analyst 2000 – 2003

Originally Management Information Officer 1995 – 2000

Faculty of Business – Deans Unit - University of Technology, Sydney

SOFTWARE EXPERIENCE OF FAMILISATION

Analytical / Modeling

Ibase & Analyst Notebook, Statistical Program Social Sciences, RATTLE (R Analytical Tool)

SAS 9.1, SAS Enterprise Miner, SAS Enterprise Guide, SAS JMP, Cognos Transformer,

Cognos 4Thought, Cognos Powerplay, R Analytical Tool, Cognos Scenario, Cognos Visualizer

Cognos Upfront, Groupwise G2 (Modelling), NUDIST (Text Mining), SQL

ATO

RAPT, AIS, Data Warehouse, Siebel Case, Siebel Analytics, Siebel Team Leader, ATOMS, Cvoc

General

Netscape, Frontpage, Dreamweaver, Internet Explorer, Microsoft office products, Mascot, ABR, Academy library and citations searching software, Inmagic, Dragon Dictation

Research Interests

Decision Intelligence, Decision Making, Analytics, Data Mining, Action Philosophy, Cognitive Development, Artificial Life, Criminal Profiling / Signposting, Safety and Risk Assessments, Hyperspace Mathematics, Hyper-dimensional Modelling, Legal - Moral and Ethics, Mind Uploading, Decision Making, Intelligence Based Techniques, Information Behaviour, Knowledge Management, Environmental Modelling, Robotics, Visual Thinking, Behavioural Analysis, Cascading Surveys, CogKnology, Community Safety Audits, Context Analysis, Decision Support, Gamification, Hyperpanofiction, Hyperpanometrics, Role Play Games.

Intelligence

- Intelligence Analyst with the University of Technology, Sydney (UTS)
- Intelligence Analyst with the ATO
- Gave conference presentations and ran small workshops on different techniques of intelligence from primary and secondary data sources
- Seconded to Olympic Security Command Head Quarters
- Seconded to Australian National University – Student Profiling, Market and Business Intelligence
- Coordinator ProDigy Project – Patrol (Local Area Command) based intelligence gathering and information distributions systems – NSW Police Service
- Published 3 articles with Future Directions International as a research Associate

Analytics

ATO

- 8 presentations to Analytics COP
- Special Interest Group Coordinator – Text Mining
- Special Interest Group Coordinator – Geocoding
- Churn models using HASH identifying unique sequencing
- Relatively transformations

AIPIO/IAPA

- Conference papers, workshops on Analytics in Intelligence practises

UTS

- 5 presentations in Institutional Research
- Special Interest Group Coordinator in Student Data Analysis

AAIR

- Various conference papers in Australia and USA, & running workshops

NSW Police Service

- Developed mathematical indexing system for Safer By Design – Building Risk Assessment tool

Presenting / Teaching / Training

IAPA / AIPIO

- Presenting at breakfast seminars and running small group workshops
- Virtual Road Tour, Open Source Data, Software and Intelligence, 2012

ATO

- Designed and delivered a training workshop in Microsoft Access to Excise (Tobacco Industry Group Active Compliance)
- Remote Ibase & Analyst Notebook training sessions
- Adobe Captiva – Making training movies