

Nicholas Spyrison

Curriculum Vitae
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Education

2018–2021 (expected) *Ph.D. Information Technology* Monash University, Clayton, VIC, AUS
Thesis: New Tools for User-guided Exploration of Linear Projections
2008–2012 *B.Sc. statistics* Iowa State University, Ames, IA, USA
Minors: physics and mathematics

Employment

2020–2020 Teaching assistant, data exploration and visualization – Monash University
2018–2018 Research officer, human geology – Monash University
2019–2019 Teaching assistant, business and economic statistics – Monash University
2018–2019 Research officer, criminology – Monash University
2016–2018 **Business intelligence developer** – CPI Card Group Inc.
T-SQL - 2012 (SSMS, SSRS), R language, GitHub, Crystal Reports, Oracle BICS, Excel

- Supply chain reporting leading to more than 4 million USD cost reduction for one location
- T-SQL development – mid-high level abstraction
- 4 reporting tools across multiple database instances

2015–2016 **Business intelligence developer** – United Dominion Realty Trust Inc. (UDR)
T-SQL - 2012 & 2016 (SSMS, SSRS, SSAS - MOLAP Cube), PowerBI, WebFOCUS – 8.0+, Excel

- T-SQL development – high level abstraction
- 3 reporting tools across several database instances
- On-call for enterprise-wide nightly data process

2014–2015 **Business intelligence analyst** – Heartland Financial USA Inc.
WebFOCUS – 8.0+, Excel

- T-SQL development – high level abstraction

2014–2014 **Laboratory technician** – The Ames Laboratory & Iowa State University
CAD Inventor, LabVIEW, Excel
2013–2014 **Delivery analyst** – International Business Machines Corporation (IBM)
Excel, VBA, R language

- Weekly metric/KPI presentations to lower and middle management
- IBM's process improvement methodology, root cause analysis, process behavior analysis
- Weekly metric/KPI presentations to lower and middle management
- Automated cleaning and metric creation in VBA for greater than 1 FTE savings across the team

2012–2012 **User interface developer** – Iowa State University
R language, GitHub, Linux Shell
2010–2012 **Laboratory technician** – The Ames Laboratory & Iowa State University
CAD Inventor, LabVIEW, LaTeX, Excel
2009–2009 **Physics tutor** – Iowa State University

- Classical physics I & II with calculus

Honors and awards

2018 ACEMS Impact and Engagement Award, for development of the R package spinifex
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2018 UseR 2018! Datathon, 3rd place, of 5 teams
for a temporal-spatial shiny dashboard of avian sightings in Australia
2008 American Legion School Award
for character, especially 'courage, honor, service, leadership, and scholarship', as nominated by my Mock Trial coach

Research summary

Visualization of multivariate spaces

- Between 2018 and 2021 (expected) researched linear projection visualization, especially as animations across local changes to the basis known as visualization tours
- 1 accepted publication, 1 R package publication
- Another 3 publications in the pipeline

Superconductors, condensed matter physics

- Between 2009 and 2014 researched pnictide superconductors (iron-based, type II superconductivity)
- 6 publications across various compositions and dopings
- Drafting and fabrication of fabricated tunnel-diode resonators with 0.01ppm sensitivity for contactless resistivity measurements
- Cryogenic application up to and including vacuum turbo-pumped, He3 systems

Membership

- Australian Centre of Excellence for Mathematical and Statistical Frontiers (ACEMS)
- Statistical Society of Australia (SSA), Victorian branch
- American Statistical Association, district 4
- Melbourne Users of R Network (MelbURN)
- Denver R User Group
- Server SQL Server User Group
- R-Ladies Melbourne
- Not so standard deviations (R podcast)
- The R-podcast
- Credibly Curious(R podcast)

Publications

Visualization of multivariate spaces

Superconductors, condensed matter physics