

John Worrall

Ascot, QLD, Australia - john.a.worrall@gmail.com - <https://johnworrall.com.au>

Aspiring Mathematician with research interests in intersecting fields of dynamic systems, computational statistics and machine learning. Currently 1st year PhD student at QUT, covering a range of issues: **variational Bayesian inference, online learning, sequential statistics, stochastic optimisation, probabilistic and approximating techniques.**

Experience

Principle Analyst - DTMR. Brisbane, 11/18 - Current

Develop and deploy real time incident reporting application for traffic operators. Infrastructure as code with CI/CD pipelines on AWS platform for scalable backend and flexible frontend. Manage team and lead a piloted cloud project for Department of Transport Main Roads (Python, JS, Postgres-RDS, lambda, S3, Athena)

Senior Analyst - DTMR. Brisbane, 7/18 - 11/18

Deliver quality data analytics via develop models to provide high quality analysis of complex datasets and use a variety of geospatial, analytical and presentation tools. (Python, Alteryx, Tableau, AWS, Postgres)

Analyst - DTMR. Brisbane, 11/17 - 7/18

Modeling and visualization for decision making including road maintenance program. Winner of customer focus KPMG hackathon. (Alteryx, Tableau, Python, Postgres, R)

Freelancer – messanalytics.org. Independent, 01/16

Communicate mathematical concepts clearly and concisely, addressing individual student strengths and weaknesses. (10-12 Math B, C, undergraduate Algebra & Calculus)

Spatial Analyst - DTMR. Brisbane, 1/12 - 11/17

Managing geospatial distributed customizable code, in-depth modeling and presentation on a number of projects. (C#, PyQGIS, ArcPy, Mapbasic, PLSQL, FME, Batch, Powershell, LAStools)

Spatial Scientist - DTMR. Rockhampton, 1/07 - 11/12

Design and develop programs and scripts for automation, completion of graduate program. (Python, C#, Mapbasic, MsAccess, VBA)

Education

PhD Student in Computational Statistics - Queensland University of Technology in 2023

MSc Applied Mathematics - University of Southern Queensland, 2018

BSc Mathematics - University of Southern Queensland, 2016

BSc Spatial Science, Hons - University of Southern Queensland, 2013

Qualifications

AWS Developer associate certification, GISP-AP

Publications

Worrall, John (2012), *Assessing Rockhampton City 2011 Flood Extents and Impacts using Remote Sensing and GIS*, USQ Research 2011. Spatial Science Symposium 2012.

Worrall, John (2018), *An ensemble-ANFIS and a hybrid SOM-ANFIS based model for stock market variable forecasting*, USQ Research 2018.

Worrall, John (2020), *Road incident and traffic monitoring in low latency environment for intelligent decision making*, ITS Asia Pacific Conference 2020, Brisbane, Australia. (Conference canceled, COVID-19)