

# Ian Thomas Watson

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## PERSONAL SUMMARY

- Expert with descriptive and predictive analytics, reporting and visualisations using R
- Experienced with machine learning modelling and classification of big-data time-series data
- Fifteen years of leadership, team management and mentoring experience
- Leading roles in designing and managing large-scale infrastructure projects up to €100m value
- Winner of the Jacinta O'Boyce Medal for the best MSc. Computing dissertation in 2018

## EDUCATION

MSc. Data Analytics (2018) - Dublin Institute of Technology – 1H

*Dissertation:* A Performance Comparison of Neural Network and Support Vector Machine Classifiers Using EEG Spectral Features to Predict the Onset of Epileptic Seizures

*Subjects:* Data Mining, Machine Learning, Data Visualisation, Statistics, Database Design, Data Management, Universal Design, Speech & Audio Analysis

CPD Dip. Computing (2015) - Dublin Institute of Technology – 1H

*Subjects:* Software Development, Information Systems, Architecture, Operating Systems and Networks, Web and User Interface Design, Database Design, Systems Analysis and Testing

B.A. Business Studies (2006) - Dublin Business School - 2.1

Dip. Electronic Engineering (1995) - Durban Institute of Technology – 1H

## TECHNICAL SKILLS

R - data modelling, statistical analysis, reporting & data visualisations

SQL & PL/SQL - used routinely for database design and ETL

Bash - scripting for automated ETL and basic server administration

Python - developed several web applications for managing radio spectrum licenses

Tableau - analysed customer traffic statistics and several MSc. papers

SAS Enterprise Miner - MSc. term paper on customer segmentation

SPSS - MSc. term paper on road accident statistics

HTML & CSS – developed several web pages and used in Shiny visualisations

## EMPLOYMENT EXPERIENCE

**Data Scientist**

**Imagine Communications**

**2015 - Present**

- Statistical analysis of network and customer data for capacity planning and network optimisation
- Data modelling, database design and ETL of LTE data using Bash, SQL and R scripts
- Develop tools and visualisations using R for customer support and network operations
- Create and maintain automated management reports for KPI monitoring
- Develop and deploy company-wide interactive BI dashboard using RStudio's Shiny package
- GIS analysis and reporting for sales and marketing forecasts using R & GIS tools
- Web application development for radio spectrum management using Python & R
- Maintain AWS server infrastructure, databases and scripts for ETL

**Network Strategist****Imagine Communications****2009 - 2014**

- Developed radio network strategy for site selection and customer forecasts
- Managed all radio planning and GIS functions to support product and sales teams
- Base station capacity modelling and customer performance analysis
- Analysed drive test results to compare planned and actual radio coverage statistics
- Managed vendor selection and RFQ process for 3G equipment procurement
- Modelled and analysed commercial and technical data to rank and select vendors

**Network Manager****Irish Broadband****2006 - 2008**

- Team management for site acquisition, radio and transmission planning teams (10 staff)
- Successfully planned & project managed 150 site broadband network deployment
- Network and customer performance analysis using Excel and GIS tools
- Developed site and spectrum license databases in Access to support planning activities

**Technology Manager****BT Ireland****2004 - 2005**

- Network solutions architect and pre-sales support for large corporate bids and key accounts
- Developed technical/financial models to evaluate emerging wireless technologies
- Lead design engineer for the Department of Justice TETRA network tender
- Technical consultancy services for operations, sales teams and external clients

**Transmission Manager****BT Ireland****2002 – 2003**

- Designed transmission network for the successful bid for Hutchison 3G contract (€100m)
- Team management and supervision for transmission planning team
- Successfully planned and project managed national wireless broadband network deployment
- Spectrum management and technical input for all ComReg industry consultations

**Senior Transmission Engineer****Esat Telecom****1999 - 2001**

- Responsible for cable maintenance agreement and support on submarine cable system
- Planning and operational support on fibre optic transmission and DSL access network

**Field Supervisor****Contractor (Telkom South Africa)****1998 - 1999**

- Project planning, supervision and technical support for installation teams
- Installation & commissioning of cellular systems and microwave radio links

**Planning Technician****Eskom South Africa****1995 – 1997**

- Project designs for VHF/UHF, microwave, power line carriers, fibre and telemetry systems
- Document scope of works, CAD drawings, bill of materials, budgets and labour estimates

**INTERESTS & ACHIEVEMENTS**

Training: Project Management Professional (IMI) and presentation skills  
Leadership skills, interviewing, conflict resolution and negotiation skills

Technical: Data and wireless protocols, radio planning, radio systems, fibre optics and PBXs

- Completed marathons and triathlons and enjoy trail running, swimming and hiking
- Interested in electronics, science and history and a member of Mensa