**Nathan Scott**

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**PERSONAL STATEMENT**

A seasoned telecommunications engineer with strong data science skills and experience. Applying an analytic and inquiring mind, I enjoy the challenge of finding creative solutions to complex problems. I hope to progress my career in data science, leveraging skills gained from over 20 years of international and local project work: (linkedin.com/in/nathanpaulscott)

**CORE SKILLS**

* Natural aptitude, experience and qualifications in data science. Ranging from programming, agile development, data sourcing / ingestion / warehousing, statistical analysis, machine learning, deep learning and visualisation
* Highly developed problem-solving abilities along with an attention to detail
* Excellent communication and teamwork skills
* Good business acumen that aligns with organisational goals
* An analytical and growth mindset with a dependable and methodical work style
* Shows initiative, adaptability and creativity in regards to ways of working and data analytics
* Project management and tracking skills with ability to operate under pressure

**EDUCATION**

**Master of Data Science with Distinction, 2020**

University of Western Australia

**Bachelor of Electronic Engineering with First Class Honours, 1992**

University of Western Australia

**EMPLOYMENT HISTORY**

**Role: Communications Engineer**

**Location: Perth**

**Employer: BHP - (2020-2022, fixed term contract)**

**Responsibilities:**

* Oversaw and developed radio network planning and optimisation for mining vehicle telemetry across two iron ore mines, including BHPs highest producing mine.
* Employed teamwork and communication skills to deal with stakeholders from a wide range of disciplines across all levels.
* Collaborative problem solving and troubleshooting of data networking incidents and issues.
* Applied a solid understanding of IP, wifi and wimax networking equipment and the systems and services that use this equipment.
* Produced weekly Radio Frequency (RF) planning reports, as well as other specialised reports as required.
* Actively participated in weekly mine planning meetings, advising various stakeholders on RF requirements and issues.
* Initiated and led investigations using data to identify potential opportunities for improvement.
* Learned and kept up to date with important software and applications via training and self-directed learning.

**Achievements:**

* Used a combination of Python, VBA, SQL and Bash to:
  + automate and optimise a complex workflow for radio network planning, resulting in improved accuracy and efficiency.
  + dump and parse configuration data of distributed network nodes, which allowed the network team to perform parameter audits more efficiently.
  + query and process network controller performance counters in order to troubleshoot and uncover problems.
  + develop a custom ETL pipeline and data warehouse, for performance troubleshooting.
* Led team that reduced mobile equipment communications-loss events from several thousand to less than one hundred per day. This long standing and production affecting problem was solved using root-cause analysis, scripting and data science methods.
* Consistently received positive feedback from mine control teams on the performance of the telemetry systems.

**Personal Development - (2017-2020)**

* Returned from overseas to live in Australia and completed a Masters Degree in Data Science.

**Role: Telecommunications Engineer**

**Location: International**

**Employers: Lucent, Ericsson, Nokia, Huawei - (1995-2017, fixed term contracts)**

**Responsibilities:**

* Planned, deployed, optimised and managed performance of many Radio Access Networks
* Provided technical support and training services to customers and peers
* Utilised many forms of data collection and analysis to understand the underlying processes behind communications network performance. From drive data collection and analysis to network performance counter and message tracing analysis
* Generated range of reports and presentations tailored to the needs of management and customers
* Used change management and vendor management to minimise risk and ensure optimal outcomes
* Mentored other engineers and collaborated with various stakeholders to achieve favourable results
* Network parameter planning and optimisation, including frequency plans, cell identifier planning, neighbour lists, camping strategies, access and load control management, RACH planning, feature testing and activation
* Participated in and managed site surveys, drive tests and in-building tests
* Extensive link budget analysis and system engineering.
* Planned and performed node software upgrades of in-service cellular networks

**Achievements:**

* Engineered cellular networks (2G, 3G, 4G to WiMAX) on 15 major projects in 12 countries giving me extensive cultural and technical exposure
* Attained expertise in:
  + terrestrial radio wave propagation
  + communication network principles
  + OSI protocol stack analysis
  + vendor parameters and counters
* Gained a very good understanding of RAN engineering from both the vendor and operator sides
* Developed software and tools with a CI/CD and agile mindset, using VBA, VB.NET, SQL and Python
* Developed a mapinfo based geo-visualisation and analytics tool which I used daily and enabled me to work more efficiently and comprehensively on many projects
* Solved highly sensitive inter-vendor IRAT issues on several projects having a significant impact on project development and network performance
* Trained many types of radio propagation models from statistical to pseudo-deterministic to ray-tracing. This included planning, data sourcing, data collection, data cleaning, model training, presentation and deployment of models.
* Reduced company costs by developing novel propagation models that required less training data in addition to developing ways of extracting the training data from existing networks

**TECHNICAL SKILLS**

* Windows, Linux, Containers, Cloud, Version control, CI/CD
* Python , R , SQL , VBA , Javascript , HTML/CSS , Mapbasic, Bash, C , C++ , VB.NET , Spark , Matlab
* MS Office, Excel, Powerpoint, Word,
* Python , R , SQL , VBA , Javascript , HTML/CSS , Mapbasic, Bash, C , C++ , VB.NET , Spark , Matlab
* AWS: boto3, dynamo, s3, ec2, lambda, api-gateway, iam, eventbridge, ecr, cloud-front, cloud formation
* SQL, noSQL, Nginx, Apache,
* Mapinfo, Globalmapper, ArcGIS, Google Earth, Google Maps, GeoPandas
* pandas, sk-Learn, tensorflow, keras, pytorch, stan, power BI, tableau, pyspark, opencv, OpenMP/I, Jupyter/colab, R Studio, pycharm, Visual Studio, VSCode, VIM, Flask, Raspberry Pi, Arduino

**REFERENCES**

Available on request.