

WINTON NATHAN-ROBERTS

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Portfolio Page

in winton-nathan-roberts

📍 Sydney, NSW

EXPERIENCE

Software Engineer and Researcher

Oracle via The University of Sydney

📅 December 2019 – April 2020 📍 Sydney

- Developed an algorithm for parsing plaintext security protocols described in HyperLTL into a monitor of logs for their violation.
- Test Driven Development with CI/CD
- Wrote accompanying research paper and presented a seminar
- Stack: Python, PyTest, Git, GitHub

Software Engineer and Researcher

Rio Tinto Centre for Mine Automation

📅 January 2019 – August 2019 📍 Sydney

- Developed a polynomial time train scheduling algorithm for automated ore transport over the Pilbara mine train network.
- Test Driven Development with CI/CD
- Documentation via \LaTeX report writing and Jira
- Stack: Python, PyTest, Git, JIRA, BitBucket, SimPy and Gurobi

Casual Academic Staff

The University of Sydney

📅 August 2019 – July 2020 📍 Sydney

- Tutor for MECH3460, DATA1901, & MATH1005 (Data Analysis)
- Clear communication of technical engineering concepts

PERSONAL PROJECTS

NLP Beverage Classifier with React Frontend

Stack: 🐍 Python (Keras) 🧠 Tensorflow 📦 Node.js ⚙️ React.js

Links: 🌐 sourcehut 🌐 Heroku (Live Demo)

COVID-19 Data Analysis and Modelling

Stack: 🐍 Python (Pandas, Scipy, Numpy)

Links: 📄 Jupyter Notebook 📄 Research Paper

Peer-to-Peer Blockchain

Stack: 🌐 Java ⚙️ Git

Link: 🌐 sourcehut

BikeRadar: Share Bike Aggregation

Stack: ⚙️ React Native 📄 JavaScript ⚙️ Git

Links: 📱 iOS App Store 📱 Android Play Store

Wild West Zombie Mobile Game

Stack: 🎮 Unity3D 📄 .NET C#

Link: 📺 YouTube

SUMMARY

Dependable with strong problem solving, communication and technical skills.

SKILLS

Languages

Java Python JavaScript C CSS
HTML PostgreSQL Bash C# R
Lisp Haskell SQL PHP Prolog

Specialities

Algorithms Data Structures IT
Data Analysis Artificial Intelligence
OOP Distributed Systems Linux

Frameworks

Node.js React.js React Native Unity
Antlr Git Jira Pandas Django
Keras Tensorflow AWS Firebase

Quantitative Finance

Stochastic Processes Statistics
Linear Modelling Financial Derivatives

Mechanical Engineering

Control Systems HVAC Pipeline Design
Solidworks CAD ANSYS/Solidworks FEA
Mechanical Design Manufacturing

EDUCATION

BSc (Computer Science, Financial Maths)

The University of Sydney

📅 Graduated July 2020 | WAM: 83.9

BEng in Mechanical Engineering (Hons)

The University of Sydney

📅 Graduated July 2020 | WAM: 83.9

REFEREES

Dr Sasha Rubin – Supervisor

@ Oracle/University of Sydney

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Dr Andrew Hill – Director

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