# WINTON NATHAN-ROBERTS

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## EXPERIENCE

### Summer Research Project
**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
- Python, PyTest, Git, GitHub

### Software Engineering Internship
**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 reports, Jira and Seminars
- 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
🧠 **TF Keras** aws **Serverless** 🔽 **Pipelines** 🐳 **Docker** ⚛ **React**

Links: </> Source    Ⓗ Demo

### Marvel Site
⚛ **React.js** 🐾 **Styled Components** 🗐 **Bootstrap**

Links: </> Source    Ⓗ Demo

### COVID-19 Data Analysis and Modelling
🐍 **Python (Pandas, Scipy, Numpy)**

Links: CO Jupyter Notebook    📄 Research Paper

### Peer-to-Peer Blockchain
☕ **Java** ◈ **Git**

Link: </> Source

### BikeRadar: Share Bike Aggregation
⚛ **React Native** Ⓙⓢ **JavaScript** ◈ **Git**

Links: 🍎 iOS App Store    ▶ Android Play Store

### Wild West Zombie Mobile Game
◁ **Unity3D** ⊙ **.NET C#**

Link: ▶ YouTube

## SKILLS

Languages

Java   Python   JavaScript   C/C++
CSS   HTML   PostgreSQL   Bash   C#
R   Lisp   Haskell   MySQL   PHP   Prolog

Specialities

Algorithms   Data Structures   IT
Data Analysis   Machine Learning
OOP   Distributed Systems   Linux

Frameworks & Libraries

Node.js   React.js   React Native   Antlr
Pandas   Keras   Tensorflow   Styled

Cloud Technologies

Azure   AWS   Serverless   RDS   Firebase
Supabase   Lambda   Cloud Watch   S3

Testing Frameworks & Project Management

Cypress   Storybook   PyTest   JUnit
Sentry   Clickup

DevOps

Docker   Git   Jira   BitBucket Pipelines

Quantitative Finance

Stochastic Processes   Statistics
Linear Modelling   Financial Derivatives

## EDUCATION

### BSc (Computer Science, Financial Maths)
**The University of Sydney**

📅 Graduated July 2020 | WAM: 83.9

### BEng (Mechanical Engineering) (Hons)
**The University of Sydney**

📅 Graduated July 2020 | WAM: 83.9

## REFEREES

**Dr Sasha Rubin – Supervisor**
@ Summer Research Project
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**Dr Andrew Hill – Supervisor**
@ Rio Tinto Centre for Mine Automation
✉ andrew.hill@sydney.edu.au