

# RODO NGUYEN

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Data | Artificial Intelligence | Software  
rodonguyen.dev

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## EDUCATION

### Queensland University of Technology (QUT)

Graduated Nov 2022

Bachelor of Information Technology - GPA: 6.4 / 7.0

Computer Science Major; Intelligent Systems Minor

Relevant coursework: Algorithm Design & Data Structures, Web & Cloud Computing, Machine Learning,

## EXPERIENCE

### Vacation Researcher – CSIRO

Nov 2022 – Feb 2023

- I am developing super lightweight Artificial Intelligent models that can be trained and deployed on Edge AI devices (microprocessors)

### Research Intern – QUT

Dec 2021 – March 2022

- Analysed the Effectiveness of Verifiable Python (vPython) for Software Cybersecurity by identifying its important characteristics: **90%** Confidence Interval that covers 75% of the spotted memory trace variations. Led by Dr. Gowri Ramachandran
- Eliminated **~95%** of manual work by developing an **automated** analysis pipeline that executes the programs, analyses and records results with Bash Script and Python
- Won the best research poster award

### International Students Officer – QUT Student Guild

Dec 2020 – Dec 2021

- Advocated for international students on a university-wide scale to ensure they have adequate conditions to thrive by liaising with a wide range of stakeholders and taking part in planning campaigns and initiatives that benefit and represent international students

## HIGHLIGHT PROJECTS

### BitTracker

Pandas, React | Time-series data, Finance | [GitHub](#) | [Blog](#)

- Programmed a cryptocurrency **trading bot** in Python that theoretically brings **+110%** profit annually on average in a market cycle by utilising SuperTrend indicator.
- Maximised potential BitTracker risk-adjusted return by backtesting the algorithm on historical price data using Pandas and selecting the best configuration.
- I'm developing a User Interface with React for an intuitive backtest history review and bot operation

### Twitter Spam Detection

Python | Natural Language Processing | [GitHub](#)

- Led a team of 4 to design 4 separate **Machine Learning models** that can identify spam tweets with **>95%** accuracy (LSTM, Transformer, SVM and Naive Bayes), provided insights into each model's strengths and shortcomings
- Evaluated the suitability for **real world** application: Naive Bayes won due to its low training, inference time, high weighted-F1
- Further minimised the computation consumption by deeply analysing the dataset and removing uninformative features without impacting the accuracy

Also in this repository: Reports & Codes of Movie Recommendation (Clustering), Number Recognition (Computer Vision), Person Re-identification, Forest Classification, Crime Prediction (Regression Model)

### Twitter E-nalyst

NodeJs, React, AWS, RestAPI | Software | [GitHub](#)

- Built a React web application with a modern user interface that analyses keyword sentiment on Twitter using Twitter REST API
- Implemented **auto-scaling** server using AWS EC2, Elastic Load Balancing and Auto Scaling stack to handle inconsistent usage
- Reduced latency by **10** times by integrating **persistence** services (S3, Redis and ElastiCache)

### Personal Website

React, HTML, CSS | [rodonguyen.dev](#)

- Programmed my responsive personal website from scratch with React
- All styling was made with CSS and no Bootstrap, which was a fun & unique experience

## SKILLS

Languages: (Proficient) Python, JavaScript, SQL; (Intermediate) Java, C#, C/C++, Bash Script

Artificial Intelligence & Data Science: ETL, Pandas, Keras, PyTorch, Sklearn, Statistics, ML Model Engineering, Data Visualisation

Software Engineering: Cloud services (AWS), React, NodeJs, Docker

Project management: Jira, Slack, Agile, Trello, Scrum

Others: Linux/Ubuntu, Git/GitHub, Embedded Systems

## ADDITIONAL EXPERIENCE & ACHIEVEMENTS

Ravi's Study Program: 3-month Intensive Programming Bootcamp

Nov 2022 – Feb 2023

QUT Dean's List

2022

HiQ Concierge at QUT: Worked collaboratively and communicated effectively to service our students and the public

2022

Australian GovHack: Honourable Mention with project '[Outliers](#)' in Youth education and employment

2021