

# RODO NGUYEN

## Data | Artificial Intelligence | Software

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I'm a motivated data scientist who loves to create data-driven products that bring value to users at scale. Equipped with a diverse skill set, from software development, data analysis to deep learning model design, I'm excited to take on new challenges.

## EDUCATION

### Queensland University of Technology (QUT)

2019 – 2022

Bachelor of Information Technology - GPA: 6.4 / 7.0

Computer Science Major; Intelligent Systems Minor

Relevant coursework: Database management, Machine learning, Cloud computing, Software development

Awards: Dean's List; GovHack 2021 - Honourable Mention with project 'Outliers' in Youth education and employment

## EXPERIENCE

### Vacation Researcher – CSIRO

Starting in Nov 2022 – Feb 2023

- I will be researching and developing lightweight Artificial Intelligent models that can be deployed in Edge AI devices. This aims to sense the ocean's temperature without a specialised device, only based on signal perturbations of underwater cables.

### Vacation Researcher – QUT

Dec 2021 – March 2022

- Analysed the Effectiveness of Verifiable Python (vPython) for Software Cybersecurity by identifying a **90% Confidence Interval** that covers **75%** of the spotted memory trace variations. The project was 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**

### HiQ Concierge – QUT

Nov 2021 – Feb 2022

- Worked collaboratively to service our QUT students and the public for all of their university-related queries
- Communicated effectively with clients and guided them through the resources

## HIGHLIGHT PROJECTS

### BitTracker | Time-series data, finance, data analysis/visualisation | [GitHub](#)

- 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. [Read more in this blog.](#)
- I'm developing a User Interface with React for an intuitive backtest history review and bot operation

### Twitter Spam Detection | Natural Language Processing, Data analysis/visualisation | [GitHub](#)

#### Python (Keras, Pandas, Numpy, Sklearn, Matplotlib), Git

- Led a team of 4 to design **4 separate Machine Learning models** to identify spam tweets with **>95%** accuracy (LSTM, Transformer, SVM and Naive Bayes), gained deep insights into each model's strengths and shortcomings
- Evaluated the **suitability for real world application** and Naive Bayes is the winner due to its extremely low training & inference time and high weighted-F1 score
- Further reduced the computation consumption by analysing the dataset and removing uninformative features without impacting its 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 | Software Development, Front-end, Back-End | [GitHub](#)

#### NodeJs, React, AWS, RestAPI

- Built a web application with an intuitive & 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 and ElastiCache)

## SKILLS

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

**OS & Tools:** Linux/Ubuntu, Git/GitHub, Jira, Agile, Scrum, Embedded Systems

**Artificial Intelligence & Data Analytics** related: Python Data Science libraries (Pandas, Numpy, Keras, PyTorch, Sklearn, Matplotlib), Statistics and Maths, Machine Learning model design, Data manipulation and visualisation

**Software Engineering** related: Cloud services, Algorithms and Data structures, ExpressJs, React, NodeJs, Docker,

## VOLUNTEERING

- Secretary** at VietQ (QUT Vietnamese Students Association)

Nov 2020 – Nov 2021

Promoted Vietnamese culture as a team; Managed intermediate & long-term operations of the organisation

- International Students Officer** at QUT Student Guild

Dec 2020 – Dec 2021

Advocated for and assisted international students on a university-wide scale to ensure they have adequate conditions to thrive

## REFEREES

Dr. Gowri Ramachandran – Research Fellow

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