RODO NGUYEN

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SUMMARY

- A Computer Science Graduate with extensive experience in Software Engineering and aspiration for Machine Learning.
- Possess diverse experience working in software consultancy, research, and customer-facing roles.
- Problem-solver and Fast learner with project management skills and the ability to excel under pressure.
- Champion of writing clean and maintainable code. Security at heart.

EXPERIENCE

Vacation Researcher – *CSIRO-Data61*   Nov 2022 – Feb 2023
- Single-handedly explored and evaluated suitable C++ machine learning libraries for a new EdgeAI & Computer Vision project. Found an open-source one - MLPack - and implemented some prototypes to demonstrate to supervisors.
- Conducted multiple experiments on multiple devices which provide insights into the library's resource consumption (memory, runtime), ensuring the stability of the library.
- In the end, revised the outcome and drew a viable "Deployment Phase" plan for the future team which is to utilise this library to run on-device ML training on Raspberry Pi Zero W.

Software Engineer – *S23M* | *GitHub*   Mar 2022 – Nov 2022
- Built an app with a minimal yet, modern User Interface to interact with a Health Data Server (CRUD) as a trial model for an international health organisation.
- Implemented core features of the app, allowing querying and editing data through RestAPI and presenting queried results intuitively on the Client-side, using React, NodeJS, AgGrid, Bootstrap.
- Led the team of 4 for a period, ensured progress is on-track with the sprint plan, and communicated clearly with the product owner to build a product that met their expectation.
- Constructed detailed onboarding documentation and tutorials for users / future developers.

Software Engineer Intern – *QUT*   Dec 2021 – April 2022
- Evaluated the effectiveness of Verifiable Python (vPython) for software cybersecurity by testing, improving it in the development environment and ensuring output consistency.
- Developed a completely new automated analysis pipeline (Bash Script and Python) that eliminated ~95% of manual work: executing the programs, analysing output, and recording results.
- Won the Outstanding Achievement Award at the end of the program.

HIGHLIGHT PROJECTS

CoolerDate
MongoDB, ExpressJS, React, NodeJS | Web App | GitHub
- A unique full-stack app built to make "Asking someone out for a date" simpler and even more special.
- Applied MERN architecture (MongoDB, ExpressJS, React, NodeJS), designed suitable database schemas, implemented multi-step forms and a multitude of API endpoints, and utilised React Hooks (e.g., useMemo), all of which have broadened my experience in Full-stack development, System Design, and Database Modeling.
- Fully automated server testing process using Chai framework due to high level of complexity.

Twitter E-nalyst
React, ExpressJS, AWS, RestAPI | Web App | GitHub
- Built a React web application with a modern user interface that generates keyword sentiment analysis on Twitter.
- Implemented scalable server using AWS EC2, Elastic Load Balancing and Auto Scaling stack to handle inconsistent usage, data were queried via Twitter API.
- Reduced latency by 10 times by integrating persistence services (S3, Redis and ElasticCache).

BitTracker

Pandas | Time-series data, Finance | GitHub | Blog

- Programmed a cryptocurrency trading bot in Python that can auto-trade efficiently while guaranteeing minimal risk.
- Backtest results showed +110% profit annually on average by utilising SuperTrend algorithm. This is made possible by programmatically and analytically assessing each configuration's risk-adjusted return and profit/loss distribution.
- Applied Object-Oriented Programming to facilitate maintainability and extensibility as a large number of features were integrated into the bot.

Personal Website

React, HTML, CSS | rodonguyen.dev | GitHub

- Programmed and deployed my personal website from scratch with React.
- Customised CSS to obtain responsiveness on any device (no Bootstrap). Of course, integrated Dark Mode to accommodate users with photophobia or simply prefer dark theme. This project has broadened my knowledge of User Interface Design a lot.

SKILLS

4 years of building software and machine learning models, 1 year working in top research institutions in Brisbane:

- **Python**: 4 years building Machine Learning models with Keras, PyTorch, Sklearn; Trading Bot and Data Visualisation/Analysis with Pandas, Numpy, MatplotLib; Leetcoding.
- **JavaScript, HTML/CSS**: 3 years building **Full-stack App** with React, Docker, AWS cloud service (CoolerDate, Twitter E-nalyst, Personal Website). Frameworks: ExpressJS, MongoDB, Chai, Mongoose, Bootstrap, Material UI.
- **C#, Java, C/C++**: 2 years working on OOP projects, applying data structures, search algorithms.
- **SQL**: 2 years implementing and querying from database: MySQL, SQLite.
- **Project management**: Jira, Slack, Agile, Trello, Scrum.
- **Others**: Linux/Ubuntu, Git/GitHub, Embedded Systems, Bash Script.

EDUCATION

Queensland University of Technology (QUT)   Graduated 2022

Bachelor of Information Technology - GPA: 6.4 / 7.0

Computer Science Major; Intelligent Systems Minor

Achievements: International Merit Scholarship, Dean's List

VOLUNTEERING & ADDITIONAL ACHIEVEMENTS

Ravi's Study Program: 3-month Intensive Programming Bootcamp   2023

HiQ Concierge at QUT: Worked collaboratively and communicated effectively to serve our students and the public   2022

Australian GovHack: Honourable Mention with project "Outlier" in Youth Education and Employment   2021