Rui (Ray) Yuan

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Objective

With a background in Electrical, Telecommunications and Network Engineering, I am pursuing a career as a professional engineer, where I may use my tertiary knowledge and practical experience to support projects, solve complex problems, contribute to a team and add significant value to an organisation, whilst also continuously learning and growing my skills within industry.

Employment History

2019 - 2020 — Sage View Technology - **Software Engineer**
Oakleigh, VIC

- Worked with NOVATTI company building payment system based on Alipay White Box.
- Calibrated the website (search page, payment function, database movement).
- Captured panoramic photos and processed them with Cupix
- Developed image processor by machine learning two ways' GAN.

Education

Master's Degree - Electrical Engineering
The University of Melbourne
2017-2019 — Melbourne, VIC Australia

Bachelor's Degree – Telecommunications Engineering
Harbin Institute of Technology
2012-2016 — Harbin, Helong Jiang Shen, China

Degree Related Projects

ANZ Virtual Internship Program || ANZ | 2020

- Investigated a list of emails and classed some of them as malicious
- Detected suspicious network activity by applying cyber security knowledge
- Analysed packet capture files from ANZ inner network traffic
- Rebuilt the network activity and extracted images and files
- Examined the raw HEX and analysed the data

Capstone Project || University of Melbourne | 2018 - 2019

- Delivered a city-scale energy consumption model with an hourly resolution in a group of three
- Took charge of modelling energy consumption for buildings, data analysis and prediction
- Modelled all 38 archetypes by eQUEST software
- Predicted future energy consumption by deep learning
- Received first-class honour for the work conducted

Machine Learning and Optimisation || University of Melbourne || 2019

- Learned about optimisation theories
- Applied optimisation theories on conventional machine learning problem
- Practised coding for neural network and deep learning
- Programmed a pendulum to make it balance in virtual environment by reinforcement learning
- The program managed to balance the pendulum for 90 seconds with strong disturbances

Digital Storage Oscilloscope || University of Melbourne || 2018

- Designed the schematic based on requirements
- Built and simulated the schematic in LTspice
- Created libraries and format for some components, layout design by Altium Designer
- Assembled the Oscilloscope by soldering, testing and troubleshooting
- Programmed CPLD and MCU (Given code in this project)
- The oscilloscope showed stable performance within 20Mhz inputs

Control System || University of Melbourne || 2018

- Built mathematical model for a given inverted pendulum on the EV3 robot
- Simulated the model in Matlab and applied control theories to keep the system stable
- Programmed the EV3 robot and balanced the pendulum with a disturbed environment

Creative Innovative Engineering || South East Water || 2017

- Worked with three engineers from different fields (environment and infrastructure)
- Learned about the life-cycle and comprehensive tools for developing innovative products
- Made an innovative plan for the company to increase their profits and improve their services
- Delivered a presentation for our project in the South East Water company
- Discussed the plan with their technique engineers and business managers

PCB Game Console || University of Melbourne || 2017

- Drew the schematic based on given components
- Designed the PCB layout
- Assembled the JTAG and circuit board by hand soldering
- Programmed the game for the PCB
- Burned the game in and adjusted the performance

Graduation Project || Harbin Institute of Technology || 2016

- Focused on remote sensing algorithms on green algae detection
- Collected and analysed three satellites raw data sources
- Researched and applied 5 algorithms on collected satellite data
- Improved algorithms based on satellite sensors

Technical Skills

- High speed electronics design
- Network engineering
- Programming (JavaScript, C, PYTHON, LINUX, PHP)
- Industry software skills (MATLAB, CADENCE, LTSPICE, ALTIUM DESIGNER, HFSS, UNITY3D)
- Printed Circuit Board design
- Signal processing (filter design by Matlab and DSP)
- Machine learning
- Report writing (LATEX, MICROSOFT OFFICE)

Additional Qualifications and Licences

Network Engineer Certification | JNCIA-JUNOS

Professional Year Program | Engineers Australia

Certificate IV in Business | Navitas Professional

NAATI Interpreter Certificate

Awards and Achievements

First Class Honours – Capstone Project | University of Melbourne

Graduation Project Award | Harbin Institute of Technology

Minor Award Scholarship | Harbin Institute of Technology

Referees

References can be provided upon request