TAN LI TUNG

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I am a first-class honor final year Electrical and Electronics Engineering student from Universiti Teknologi PETRONAS. Besides technical skills such as programming and simulation, I also have a strong leadership, teamwork, communication, and critical thinking skills that are demonstrated in my projects and experience.

Multisim | MATLAB | C | Python | R | Arduino | PIC 18 | Flutter | Microsoft Office | LaTeX

EDUCATION BACKGROUND

Bachelor's Degree — Universiti Teknologi PETRONAS (UTP)
Electrical and Electronics Engineering — 09 / 2018 – Present

- CGPA: 3.96
- Consecutive Dean's List Holder.
- Scholar of CIMB ASEAN Scholarship.

Foundation — Universiti Teknologi PETRONAS (UTP)
Electrical and Electronics Engineering — 07 / 2017 – 07 / 2018

- CGPA: 3.96
- Consecutive Dean's List Holder throughout foundation studies.
- Best Student Award for Electrical and Electronics Engineering.

WORKING EXPERIENCES

Research and Development Intern — ViTrox Corporation Berhad, Penang
Main Tasks and Achievements — 01 / 2021 – 08 / 2021

- Designed and implemented a novel image similarity measure approach.
- Successfully designed and implemented a series of image quality metrics, including luminance, contrast, sharpness, and noise.
- Accomplished the migration of codebase from Python 2 to Python 3 and standardized the code convention for the team.
- Established an online community for the company as a candidate relationship management project with 9 other interns from different backgrounds and universities.

ENGINEERING PROJECTS

Remote Patient Monitoring System Using Arduino and Flutter

- Lead 3 engineering students to build a remote patient monitoring system that uses Arduino ESP32 NodeMCU Module with a few sensors to detect the patient's heart rate, blood oxygen level, temperature, position, and location and transmit the data to Firebase and display the data in a mobile app using Flutter in realtime.
- Successfully build the working prototype and mobile app with maps feature and patient's position prediction (lying, walking, standing etc.) using statistical approach.
- Won the champion for the competition.

Smart Drunk Detector Using NDIR Sensor and Keras Sequential CNN Model

- Lead 4 engineering students to build a drunk detector mechanism that utilize the use of Non-Dispersive Infrared (NDIR) sensor and Keras Sequential Convolutional Neural Network (CNN) model.
- Successfully build the simulation that is hosted by Python Flask using 1400 training data and obtained 98.17% accuracy based on 600 test data.

Hangman Using C Language

- Build a hangman game by implementing graphic library (gfx) and simple data storage using text file.
- Successfully challenge third (highest) level project with graphic and data storage (https://github.com/tanlitung/C-Hangman).

Pinball Machine Using PIC 18

- Clone a pinball machine to learn the working of PIC 18 microcontroller.
- Successfully build a workable pinball machine clone with PIC 18, ultrasonic sensor, touch sensor and force sensor.

Rectifier Circuit Using Multisim and Eagle

- Simulate and build a rectifier circuit in both Multisim and real rectifier.
- Successfully build a functional rectifier circuit on PCB designed by Eagle.

X-Ray Image Similarity and Quality Metrics

- Designed and implemented a novel image similarity measure approach for X-Ray images.
- Successfully designed and implemented a series of image quality metrics, including luminance, contrast, sharpness, and noise.

CLUBS, SOCIETIES AND VOLUNTEERING EXPERIENCES

Vice Chair, Institute of Electrical and Electronics Engineers (IEEE) UTP Student Branch

- Lead a total of 15 students from both undergraduate and postgraduate to organize online workshops.
- Invited 10 speakers from various countries including United States, Bahrain, Hong Kong and China.
- Successfully organized more than 5 technical workshops with more than 500 participations.

Secretary, UTP App Development Club (UTP ADC)

- Established the club by gather 40 undergraduate students who are interesting in programming.
- Successfully developed app and website for the club (utpadc.github.io).

Secretary General, Student Representative Council (SRC UTP)

- Elevate the use of Microsoft Teams, Flow and SharePoint in the SRC working flow by 50%.
- Successfully increase the performance of SRC by 20%.

Project Manager, WebX UTP Online Web Development Course (Community Engagement Project)

- Lead a team of 20 students and worked closely to provide free online web development course.
- Successfully receive more than 150 participations with 100% positive feedback.

Coach, Dphi 5-Week Data Science Bootcamp

- Closely monitor 50 assigned learners' progress and guide more than 800 learners through Slack.
- Successfully conduct live session on introduction to machine learning and linear regression (1425 views).

AWARDS AND RECOGNITIONS

Champion | Invent for The Planet (2022) | International

- Hackathon organized by Texas A&M University and Universiti Teknologi PETRONAS (UTP). Our team of 5 members came out with an idea to develop a self-charged keyboard that could harvest energy from each keystroke.
- Successfully produced the 3D model of the keyboard switch and won the champion of the competition.

First Runner Up | i-UM Disrupt Hackathon (2020) | National

- Hackathon organized by Universiti Malaya (UM). Our team of 3 members came out with an app that can detect risk of COVID-19 exposure based on location using AI Algorithm.
- Successfully build the app using React Native and won the first runner up.

Rank 9 Finalist | Asia Pacific University Battle of Hackers (2019) | National

- Hacking competition organized by Asia Pacific University associated with cybersecurity week.
- Our team of 3 members participated in capture the flag (CTF) that involves cryptography, reverse engineering, forensics and many more.
- Successfully won the Rank 9 finalist among more than 60 teams.

Champion | RoboCup Singapore Open (2015) | International

- RoboCup Singapore Open is a robotics competition organized by Singapore Polytechnic and Science Center Singapore.
- Our team built a robot using Lego Mindstorm that can operate in various terrain to complete the mission given.
- Successfully won the champion of the competition of international category.

Referees

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