



PRATHIK BALACHANDRAN

Electrical and Computer Systems Engineer

An aspiring and dedicated Electrical and Computer Systems Engineering final year student furnished with excellent problem solving skills, communication skills and leadership background, and an enthusiastic person able to work in a fast-paced working environment where I can utilize my knowledge and decision-making skills. Beyond that very ambitious in working on Electrical & Electronics Engineering, Software Engineering, Artificial Intelligence and Machine Learning.

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📍 Subang Jaya, Malaysia

🇮🇳 Nationality: Indian

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EDUCATION

Bachelor of Electrical and Computer Systems Engineering (Honours)

Monash University Malaysia

10/2018 - Present

Academic Record

- Current CGPA: 3.4/4.0
- Current WAM: 74.326%
- On track for Second Upper Class Honours (H2A)
- Expected Graduation Date: June 2022

WORK EXPERIENCE

Artificial Intelligence/Machine Learning Engineer Intern

Aye Solutions Sdn Bhd

02/2021 - 03/2021

Kuala Lumpur, Malaysia

Tasks/Achievements

- Worked with a team of passionate AI/ML engineers in developing artificial intelligence systems and interns are given the opportunity of applying problem solving skills.
- Research existing papers on Computer Vision, Machine Learning and Artificial Intelligence and enhance existing open-source models.
- Perform statistical analysis and document the impact of machine learning models.
- Developed a facial recognition system used to authorize employees into restricted areas built by using Intel Distribution of OpenVINO Toolkit, Intel Neural Compute Stick 2, Intel RealSense ID F455 and Raspberry Pi 3 Model B+.
- Projects include: Facial Recognition Attendance System.

TeaMWork Intern

Monash Warwick Alliance

05/2021 - 07/2021

Subang Jaya, Malaysia

TeaMWork Virtual Internship Program - Monash University & The University of Warwick

Tasks/Achievements

- Supervised and worked under the company 'Alchemy' and 'CDR' (Corporate Digital Responsibility), a management consultancy which specializes in Business and Digital Transformation.
- Built key partnerships with international stakeholders.
- Collaborated with an international team to provide high quality research to industry partners.

Undergraduate Research Assistant

Monash University

04/2020 - 11/2020

Subang Jaya, Malaysia

Undergraduate Research Opportunities Program (UROP)

Tasks/Achievements

- Project Title: Wearable Pollution Sensor with BME680 Connected via Bluetooth to a Smartphone for Air Quality Measurements.
- Worked under supervision on research topic "Wearable Pollution Sensor" based on Gas Sensor BME680 and ESP32 WiFi & Bluetooth microcontroller used to display temperature, humidity, pressure and gas levels on your smartphone.
- This program provided me an early opportunity to experience a genuine research environment, working either with a supervisor and/or a research group. Through UROP, I acquired knowledge and numerous skills which will allowed me to confidently progress to more independent tasks. Participation in this program gave me the advantage in research when I commenced my Final Year Project.

PERSONAL PROJECTS

Incremental Deep Learning for Facial Expression Recognition (08/2021 - Present)

- Final Year Project Title (at Monash University) - Incremental Deep Learning for Facial Expression Recognition.
- 'Incremental Deep Learning for Facial Expression Recognition' is a continual-learning problem in the facial expression recognition field where many of the facial expression datasets available in the field are of smaller size and this makes the training of a neural network more difficult.
- Developing a deep learning algorithm to apply an incremental learning model or approach to this dataset where the knowledge learned from training one dataset is transferred to another dataset. Implemented using PyTorch and a high-end GPU.

Autonomous Robot (08/2020 - 11/2020)

- Built an autonomous robot capable of gripping pucks for colour sensing and flipping the pucks depending on the colour detected.
- Achieved 4th place out of 20 teams.

Memory Training Game and Agriculture App (03/2019 - 05/2019)

- Developed a memory skill based game and a proof-of-concept app to present the user with historical temperature data and assist with their decisions in growing sustainable crops built by using HTML, CSS and JavaScript.

VOLUNTEER EXPERIENCE

IEEEXTREME15.0 Student Ambassador

Institute of Electrical and Electronics Engineers (IEEE)

06/2021 - Present

Achievements/Tasks

- Assist Student Branches in hosting the IEEEExtreme Programming Competition and also supporting members not in a Student Branch in finding a suitable venue for participation.
- Reach out to colleges, universities, IEEE Student Branches and IEEE Student and Professional Members encouraging them to take part in the IEEEExtreme Programming Competition.
- Host IEEEExtreme seminars, pre-workshops, training programs, and recruitment drives in universities/colleges.

Co-Tech Lead

Google Developer Student Club Monash University Malaysia

10/2020 - Present

Subang Jaya, Malaysia

Developer Student Clubs (DSC) is an initiative carried out by Google Developers in universities across the globe with the intention of helping student developers learn together and work with their communities to solve real-life problems.

Achievements/Tasks

- Successfully organized and hosted hackathons, virtual webinars and programming competitions during my tenure.
- Responsible for hosting a meeting every month to review the current performance of the club and solve problems to enhance club recruitments and student social life especially during the COVID-19 pandemic.

Logistics Officer

Engineers Australia Monash Sunway Student Section (EAMSSS)

03/2019 - 10/2020

Subang Jaya, Malaysia

Achievements/Tasks

- Successfully conducted and assisted the Monash Hackathon Competition 2019 and Engineering E-Exploration Week 2020 virtually.
- Organized various webinars, workshops and industrial site visits during my tenure such as Engineering Mentorship Programme, Company Industrial Visits and Refugee Outreach Programme.

SKILLS

Python	● ● ● ● ●	Git, GitHub, GitKraken	● ● ● ● ●
C/C++	● ● ● ● ●	Unix/Linux	● ● ● ● ●
C#	● ● ● ● ●	HTML, CSS, JavaScript	● ● ● ● ○
Machine Learning	● ● ● ● ●	AWS Cloud Services	● ● ● ● ○
Data Structures and Algorithms	● ● ● ● ●	MATLAB/Simulink	● ● ● ● ○

REFERENCES

Ms. Yee Yun Lim, CEO at Aye Solutions Sdn Bhd

"Internship Supervisor and Mentor"

Contact: yylim@ayesolutions-sea.com

Dr. Mohamed Hisham Jaward, Lecturer at Monash University Malaysia

"Final Year Project (FYP) Supervisor"

Contact: mohamed.hisham@monash.edu