PRATHIK BALACHANDRAN

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LINKS

Portfolio, LinkedIn

PROFILE

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 technical skills. Beyond that, very ambitious in working on Artificial Intelligence and Machine Learning.

EDUCATION

Oct 2018 — Present

Bachelor of Electrical and Computer Systems Engineering (Honours), Monash University

Subang Jaya, Malaysia

Academic Record:

- Overall CGPA: **3.41/4.0**
- Overall WAM: **74.204%**
- On track for **Second Upper Class Honours** (H2A)
- Expected Graduation Date: **June 2022**

WORK EXPERIENCE

Dec 2021 — Feb 2022

Machine Learning Engineer Intern, WISE AI

Subang Jaya, Malaysia

- Worked in the Artificial Intelligence Unit (eKYC) and development team of Facial Recognition, Liveness Detection and OCR Recognition.
- Developed End to End Facial Recognition with Synthetic Data and Face Morphing Algorithms using Deep Learning for eKYC. Includes Data Processing, Model Training and Model Deployment using Docker.
- Built pipelines (MLOps CI/CD) to improve model lifecycle management for three different facial recognition models.
- Assisted in Liveness and OCR's ID Tampering Data Collection.

Feb 2021 — Mar 2021

Artificial Intelligence/Machine Learning Engineer Intern, Aye Solutions

Kuala Lumpur, Malaysia

- Developed a Facial Recognition Attendance System using AWS, Raspberry Pi 3 Model B+ and Intel's tools such as OpenVINO, Neural Compute Stick 2 and RealSense ID F455.
- Researched existing papers on Computer Vision, Machine Learning and Artificial Intelligence and enhanced existing open-source models.
- Performed statistical analysis and documented the impact of machine learning models.

May 2021 — Jul 2021

TeaMWork Intern, Monash Warwick Alliance

Subang Jaya, Malaysia

- Supervised and worked under the company 'Alchemmy' and 'CDR' (Corporate Digital Responsibility), a management consultancy which specializes in Business and Digital Transformation.
- Researched different countries' approach towards data protection and privacy, and the growth of AI and digital sustainability.
- Built key partnerships with international stakeholders.
- Collaborated with an international team to provide high quality research to industry partners and worked on high priority projects with tact and a strong attention to detail.

Apr 2020 — Nov 2020

Undergraduate Researcher, Monash University

Subang Jaya, Malaysia

- 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.
- Developed an user-friendly app that displays temperature, humidity, pressure and gas levels on your smartphone.
- Selected to participate in the Undergraduate Research Opportunities Program (UROP) out of 200 candidates.

PERSONAL PROJECTS

Aug 2021 — Present

Incremental Deep Learning for Image Classification

- 'Incremental Deep Learning for Image Classification' is a continual-learning problem in various classification fields, such as Facial expression recognition and brain tumor radio-genomic classification datasets, where many of the 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.

Dec 2021 — Feb 2022

Face Morphing between Two Real Images using StyleGAN2

- Developed an Open Source machine learning algorithm to face morph a selfie image of a person into a passport photo style image such that the user has easy access to their passport data without facing any identification issues.
- Built using PyTorch, OpenCV and StyleGAN2 architecture.

Apr 2021 — May 2021

Sentiment Analysis on IMDb Movie Reviews

- Researched on Sentiment Analysis on IMDb Movie Reviews and classified movie reviews into positive, neutral and negative reviews.
- Developed using Natural Language Processing (NLP) techniques, PyTorch, Matplotlib and NumPy.

SKILLS

Python	PyTorch
C/C++	TensorFlow
C#	Docker
Machine Learning	Unix (Bash/PowerShell)
Data Structures & Algorithms	MySQL
Amazon AWS Cloud Services	Matlab/Simulink
Unix/Linux	LTSpice
Git, GitHub, GitKraken	Verliog/VHDL

VOLUNTEER EXPERIENCE

May 2021 — Oct 2021

IEEEXTREME15.0 Student Ambassador, Institute of Electrical and Electronics Engineers (IEEE)

- Assisted Student Branches in hosting the IEEEXtreme Programming Competition and also supported members who are not in a Student Branch in finding a suitable venue for participation.
- Reached out to colleges, universities, IEEE Student Branches and IEEE Student and Professional Members encouraging them to take part in the IEEEXtreme Programming Competition.
- Hosted IEEEXtreme seminars, pre-workshops, training programs, and recruitment drives in universities/colleges.

Oct 2020 — Oct 2021

Core Committee Member (Tech Team), Google Developer Student Club Monash University Malaysia

Subang Jaya, Malaysia

Google Developer Student Clubs (GDSC) 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.

- Successfully organized and hosted hackathons, virtual webinars and programming competitions during my tenure.
- Organized 'Android Study Jam' seminar and assisted participants in the installation and setup of Android Studio.
- 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.

REFERENCES

References available upon request