

Praveen Dhananjaya

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Summary:

Computer Engineering Undergraduate who is highly motivated about AI , Robotic and automated system development. Seeking an internships in AI base cyber physical systems for the time period October/2021 to March/2022

Relevant Coursework

- Present **Neural Networks and Fuzzy Systems** *university course*
Fuzzy pattern recognition, fuzzy control systems , Fuzzy nonlinear simulation, fuzzy decision making, cluster analysis , Supervised learning, unsupervised learning, reinforced learning, competitive learning, the delta rule, Hebbian learning , Adaline and Madaline models , Hopfield learning algorithm
- Present **Machine Learning and Data Mining** *university course*
supervised learning , ANNs(Perceptron, MLP, RNN) , Decision Trees , Classification Rules , Instance Based Learning , Clustering -Ensemble learning , Dimensionality Reduction - PCA
- 2021 **Neural Networks and Deep Learning** *Coursera Deeplearning.AI*
Shallow Neural Networks forward propagation and backpropagation , Neural Networks speed up using vectorization , Deep Neural Networks for image classification

Education:

- Present **BScEng:-** *Faculty of Engineering , University of Peradeniya* Sri Lanaka
Specialization : Computer Engineering
Current GPA : 3.40 / 4.00
- 2016 **GCE A/L:-** *Sri chandananda buddhist college*
Maths - A , Physics - B , Chemistry - B ,
z-core 1.83 , national ranking - 1206 from 25000+
- 2013 **GCE O/L:-** *Sri chandananda buddhist college*
6A pass and 2B pass

Technical Skills:

Programming languages	Java , C , C++, Python
Hardware programming	arduino , AVR C , PIC , ARM Assembly
FPGA	iverilog
Database	MySQL
Version control	Github
Web Development	HTML , CSS , php
PCB design	Altium , eagle , easyeda
3D modeling	Fusion 360 , solidworks
kinematics system	kinematics for robotic system

Projects

1.Smart warehouse management system :

Developing automated warehouse handle by AGV and Robot arm so this system is capable handle loading/unloading of goods. And e-shopping website so worldwide customers can buy their products.

Technologies : fusion 360 , custom PCB easyeda , Arduino ESP12 and uno , mqtt , AWS server , Python base UI ,

github : <https://github.com/cepdnaclk/e16-3yp-smart-pharmaceutical-warehousing>

2.FPGA base processor :

Fully functional 8 bit CPU single thread pipeline processor. Which include ALU , ram , instruction memory , data memory and ext.

Technologies : Harvard architecture , iverilog

github : <https://github.com/praveendhananjaya/CPU-8-bit-FPGA->

3. 8 bit computer :

8 bit common bus SPA 1 computer architecture. Tri stage base control system. Capable handle low memory consume algorithms (ex:- fibonacci sequence)

Technologies : Common bus architecture , custom PCB , Python base program interface(assembly)

github : <https://github.com/praveendhananjaya/CPU-8-bit-common-bus>

4.hospital management system :

Web application with Database for hospital patient and medicine management in order to billing and patient data re-coding .

Technologies : MySQL base data management system. This system run on apache php server and HTML user interface.

github : <https://github.com/praveendhananjaya/hospital-managment-system>

5.Fractal Visualizer:

JAVA OOP base programme.

Technologies : JAVA , OOP , Which is accelerated by tiled base multi threading

6. Micro Mouse:

14×14 Maze solving robot

Technologies : Arduino uno base robot with schedule base multi multiprocessing , robot navigates to target using A* algorithm and using flood fill algorithm find out the shortest path , Custom PCB , IR base sensors with active filtering

github : <https://github.com/praveendhananjaya/micro-mouse>

7. Surveillance camera system

Suspicious activity tracking. ex:- Face covers , Abandoned packages , suspicious object , unauthorized people

Technologies : python , tensorflow

8. CNC

3 axis computer numerical control machine.

Technologies : fusion 360 , mach 3 controllers , toolpath , material fabrication steel aluminium wood plastic , high induction motor control profile

9. landslide monitoring system

landslide monitoring system , low cost landslid detection and alarming system

Technologies : flexible piezoelectric sensor and single analyse , UDP communication using WiFi network

Certificates and Competitions

- | | |
|---------|---|
| Present | Rapid Embedded Systems Design and Programming:- Arm EDUCATION MEDIA ACCELERATED LEARNING
industry-standard Arm Mbed API tool and Keil MDK |
| 2021 | Neural Networks and Deep Learning:- coursera
Grade Achieved: 92.80/100 |
| 2021 | Cisco Cybersecurity:- Cisco networking academy |
| 2019 | SLIIT MicroMouse 3rd place
14×14 Maze solving robot competition. Using small robot |
| 2019 | Aces hackathon 1st place Surveillance camera system
Suspicious activity monitoring system. |
| 2018 | SLIIT MicroMouse 3rd place
14×14 Maze solving robot competition. Using small robot |
| 2018 | Aces hackathon 1st place landslide monitoring system
landslide monitoring system , low cost landslid detection and alarming system |
| | coding Competitions
12-hour algorithmic coding nationwide competition |
| 2020 | Aces coders 4th place from |
| 2019 | Mora Xtreme 4.0. 1st place |
| 2019 | Jaffna coders 4th place |
| 2019 | Aces coders participation |

- 2018 **Mora Xtreme 3.0.** *participation*
2018 **Aces coders** *participation*

Extracurricular Activities

- 2019 **Member of the Music Society of the University of Peradeniya**
2018 **Member of the drama Society of the University of Peradeniya**
2011 **Member of the Art Society of school**
2010 **school rugby team**
2009 **school hockey team**

Other Interests and Hobbies

3D modeling and digital art
cyber-physical systems
iot mini projects and experiments

References

[Dr. Isuru Nawinne](#)

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