Praveen Dhananjaya

Contact Information:

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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 , Hopefield 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 , Witch 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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