Yashas Vinay

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About Me

I am an individual who is endlessly curious about the nature of the world and trying to decipher its intricacies. This has made me a person who identifies problems and links it to concepts I have learnt in search of solutions that best satisfy the criteria. My main areas of focus are Computer vision, embedded systems and machine learning.

Education

Jawaharlal Nehru National College of Engineering
B.E , Electronics and Communication, *2018 –Present*
7th Semester,
CGPA- 8.5

St. Joseph's PU College
Pre-University College,
2016 – 2018 PCME,
Percentage: 81.5%

The Samhita Academy
CBSE, SSLC,
2015 – 2016 CGPA- 9.8

Technical Skills

Domain: Computer Vision, Machine Learning, Embedded Systems.

Languages: Python, C, Embedded C, Verilog, Assembly (8051), HTML/CSS, C++.

Developer Tools: Anaconda, Spyder, Arduino IDE, Scilab, Git, Xilinx, Visual Studio, ROS, TensorFlow.

Libraries: pandas, NumPy, Matplotlib, Scikit-learn, OpenCV, pytorch(currently learning)

Hardware: Arduino, Raspberry Pi, MSP430, NodeMCU, Jetson Nano Tx, Realsense D415.

RESPONSIBILITIES

- Software Engineer Intern for R&D department Qualitas Technologies Pvt. Ltd. Bangalore.
- Research Lead DSC-JNNCE.

PROJECTS

Spectapsis (Spectroscopic Approach to Soil Analysis) Oct 2020 – Present

- Utilizing the light spectrum reflected from the soil to determine the amount of different minerals present in the soil
- Researched PYSAT library to do spectral analysis.
- Currently utilizing OpenCV and TensorFlow models to train the camera sensors.
- This project is being funded by NEWGEN IEDC.

Student Safety Index Meter May 2020 – Sep 2020

- Generated an algorithm using Machine Learning to predict the risks of student going to college during the COVID-19 pandemic.
- It was during May-Sep the Government and Institutes were trying to find a way to analyze the risk involved if schools/college reopens and so made this project to predict the risks if the college reopens and students' starts going to college. Also presented this project to Dean of JNNCE and multiple conferences.

Front end development of DSC JNNCE website Sept 2020- Oct 2020

- As Research lead and as a part of the UI/UX team, helped conduct user surveys, create wireframes, and build base html code for the website to function.
- Website link:- https://dscjnnce.github.io/dscjnnce/

Karna Dhaana – NGO and donor interaction portal March 2020 – May 2020

- Designed this project for the DSC Solution Challenge to meet the UN Sustainable Development Goals on infrastructure and the fostering of stronger institutions.
- Video link to basic working - https://www.youtube.com/watch?v=oFfZBwEqfd4
- Problems faced during the build were primarily related to building a simulated transaction system to showcase transactions could be made on the site and to be able to set fundraising targets.
- We were unable to overcome these problems but learnt a lot about API integrations of **payment gateways** such as **PayU and Razorpay**.
- Learnt about security protocols to be utilized to protect user transaction history

Self-balancing bot using SLAM with a stereo camera setup July 2021 – August 2021

- Implemented SLAM using gmapping in ROS on an Intel Realsense D415 camera.
- Migrating the system to ORB-SLAM2 to improve movements and to add better odometry readings

AWARDS, ACCOMPLISHMENTS AND CERTIFICATIONS

- Secured 72nd National Rank and 838th worldwide Rank in Google Hash Code Competition 2019.
- Secured 1st rank in National Level Hackathon “Hack your Mind Using IoT”.
- Secured 3rd place in “UNO-Arduino” competition.
- Secured funding from NEWGEN IEDC to complete the project ‘Spectapsis’.
- Presented a research paper “The road to reopening the Educational institutes utilizing machine learning” in IEEE conference MPCIT by JNNCE.
- NPTEL Certifications earned:
    - A Brief Introduction of Micro – Sensors (Elite Certification) .

EXTRA-CURRICULAR ACTIVITIES AND EVENTS

- Organized 2 National level Entrepenureship Bootcamps in JNNCE Shivamogga.
- Coordinated and instructed in an "Advanced Microcontroller workshop" in RYMEC Bellary.
- Organized "Basic Electronic workshop" for juniors in JNNCE.
- Conducted Student Awareness Programs to Government as well as Private school Children.
- Worked with the local Archaeological Survey of India office and helped in the excavation of 3 temples in Shimoga.

HOBBIES

- I am an avid quizzer and have participated in TCS IT-Wiz, UTPT, Sci-biz-tech at IISc.
- I enjoy reading, particularly non-fiction based around anthropology, cryptography and popular science. Some of the authors that I have taken a liking to are Yuval Noah Harari, Simon Singh and Richard Dawkins.
- I am currently learning Japanese to be able to read manga.
- I do a little bit of video editing with videopad and Source Film Maker.

DECLARATION

I hereby declare that above information is correct to the best of my knowledge and belief.