SURYA LAKSHMI SUBBA RAO PILLA
Q.No. D-1/3, WCL Colony, Civil Lines, Nagpur city - 440001, Maharashtra, India
Contact No: +91-7702991733, Email / User ID: pslsubbarao@gmail.com

ACADEMIC QUALIFICATION

Indian Institute of Technology — Tirupati, India
Bachelor of Technology in Electrical Engineering | CGPA: 8.28/10 — August 2019

PROFESSIONAL EXPERIENCE

Honeywell Technology Solutions — Bangalore, India
Embedded Engineer – II — July 2019 – Present

- Engaged currently in developing autonomous aerial maritime search-and-rescue systems using computer vision to track boats in distress and to notify first responders
- Developed an algorithm using signal processing toolbox in MATLAB to differentiate methane and propane flame signatures from other flame scenarios, thereby empowering the existing flame detector to pass EN54-10, a critical European Standard
- Collaborated with a team of 4 to design and deploy Machine Learning based flame detection algorithm into Honeywell Triple-IR technology-based flame detector hardware
- Designed prototypes of camera-based flame detection using Nvidia Jetson Nano and Cortex M4 microcontroller using TinyML framework
- Mentored 2 interns with their work asks and their value addition over a span of 4 months

INTERNSHIPS

TechnoFuture — Alexandria, Egypt
Intern (AIESEC Exchange) — July – August 2018

- Coached secondary school children in developing semi-autonomous robots

Visteon Technical and Services Centre Pvt Ltd — Chennai, India
Intern — May – July 2018

- Used TensorFlow to create CNN and classify automobile telltales with an accuracy of 98%
- Developed an algorithm, using XCode and OpenCV, that is 3x time faster to compute the degree of rotation of analog fuel indicator in a car

Electronic Corporation India Ltd — Hyderabad, India
Intern — July – August 2016

- Devised a home automation system prototype using GSM module and 8051 microcontroller

ACADEMIC PROJECTS

Title: Fabrication of Metal-Oxide Semiconductor based gas sensor — August 2018 – June 2019
Team Size: 1

- Performed RCA cleaning of a p-type silicon wafer and applied magnetic spin coating method to deposit a 50nm thin Zinc Oxide nanolayer to form a p-n heterojunction
- Used NanoPVD equipment and performed RF sputtering to deposit 50nm Titanium and 100nm Aluminum to form electrodes on top of heterojunction and fabricate a gas sensor
- Characterized the fabricated gas sensor in presence of toxic gases like CO and NOx

Title: Image denoising — January – April 2018
Team Size: 2

- Applied gaussian, salt-pepper noise and blurring techniques on clear images to simulate real-life noisy images caused due to various environmental technical factors
- Used MATLAB to develop specific median and average filter kernels to denoise noisy images
- Presented a poster explaining pros and cons of certain filters to remove a particular type of noise and demonstrated live picture denoising of noisy images collected during the event

Title: Prepaid Energy Meter — August – October 2017
Team Size: 4

- Led a team to design smart power meter using MSP430 microcontroller, GSM module, and code composer studio software, to facilitate user with remote power monitoring
- Collaborated with 7INQ startup incubator to develop this idea into a working prototype

CERTIFICATIONS

- Acquired Six Sigma Green Belt DFSS Hardware certification for completing a relevant training and applying six sigma tools to resolve a critical field issue at Honeywell, July 2020
- Earned certification for completing AI/ML Bootcamp at Honeywell, September 2019

ACHIEVEMENTS

- Diamond award: Recognition for achieving 2nd position out of 276 total ideas presented in the SParkS 2021, an annual innovation competition held by Safety and Productivity Systems business unit to bring out ideas that could be commercialized, Honeywell, October 2021
- Silver award: For developing new Fire Path for flame detector, Honeywell, May 2021
- 4 IP awards: For filing four Trade Secrets at Honeywell, 2021
- Quarterfinalist team (top 500 out of 5049) in national level India Innovation Challenge Design Contest (IICDC 2017) anchored by IIM Bangalore, IIT Tirupati, February 2018

TECHNICAL SKILLS

Programming Languages: Python, C
Software: MATLAB, OpenCV, Scilab, IAR, CCS, Minitab
Computing Environments: Linux, Windows, Arduino, Nvidia Jetson Nano, TinyML framework,

EXTRACURRICULAR ACTIVITIES

Student General Secretary, IIT Tirupati September 2016 – April 2017

- Administered the first technical workshop (Topic-IoT) in IIT Tirupati, August 2016
- Represented student community in the senate meeting of IIT Tirupati, April 2017
- Collaborated with XLr8AP, a technology business accelerator, to secure summer internships for IIT Tirupati sophomore class, April 2017
- Convened ANFANG (the first Tech-Fest) of IIT Tirupati, with 10 plus events and a turnover of ₹3.5 Lakhs, March 2017

Sports and Adventure Member, IIT Tirupati Athletics team August 2015 – April 2018

- Participated in 1500 meters race, inter IIT sports meet, 2016 and 2017
- Awarded Gold, Silver, Bronze medals in 1500m, 800m, 400m races respectively, Intra-IIT Tirupati sports 2016

Class Representative of Electrical Engineering Department, IIT Tirupati January – April 2016

- Organized first RC car race competition to instigate a practical learning atmosphere

COMMUNITY SERVICE

CSR (Corporate Social Responsibility), Honeywell Bangalore, India July 2019 – July 2020

- Volunteered for a CSR visit to Agastya foundation, amongst other activities

Global Entrepreneur, AIESEC Alexandria, Egypt July – August 2018

- Participated in the AIESEC exchange program as a Global Entrepreneur volunteer to address the IX Sustainable Development goal set by UN
- Represented India in cultural activities and secondary education promotional activities

National Service Scheme (NSS), IIT Tirupati, India August 2016 – August 2018

- Coordinated institutional NSS activities for students and organized student visits accordingly
- Organized funding for “Abhayakshetram” (Orphanage) and educational campaigns for “Navajeevan Blind School”
- Participated in rural development program (NSS) and was instrumental in conducting a feasibility study at 3 out of 5 villages that have been adopted by IIT Tirupati for Rural development program