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| **DIWAKAR PAL** | **Email Id:** dpdiwakar007@gmail.com **Mobile:**+91-7289829924,+91-9548718040 |

**CAREER OBJECTIVE**

To obtain a challenging position as a Software Engineer and the possibility of career advancement.

**PROFESSIONAL SUMMARY**

* **Technically Sophisticated Professional** with **5+ years** of experience in the areas of Software Development & Testing.
* Strong experience in C Language and Python.
* Adept in end-to-end development of software products from requirement analysis to system study, designing, coding, testing, de-bugging, documentation and implementation.
* Deft at mapping the requirements, custom designing solutions & troubleshooting for complex software & application problems.
* Experience in working with different types of embedded hardware (like LCD, Sensors, Motors and Keypad etc.)
* Outstanding knowledge of software-hardware interactions and interfacing.
* High ability to identify and implement process improvements.
* 2 years of experience in Python, Data Science, Machine Learning and Deep Learning using scikit learn, tensorflow, NLP and computer vision.
* Solved data analysis problem using Linear Regression, Logistic Regression, K-Nearest Neighbors, Random Forest, Support Vector Machine(SVM), K-Means Clustering etc.
* Implements data cleaning, feature selection, feature engineering, model selection and validation technique using scikit learn using Python.

**TECHNICAL SKILL SET**

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| Language | C,C++,Embedded C, Python |
| Operating Systems | Windows, Ubuntu,ROS(Basic) |
| Machine Learning Framework | Scikit Learn, Pandas, Numpy, Scipy, Tensorflow, NLTK, Opencv, Seaborn, Matplotlib, Keras, Selenium |
| Machine Learning Technique | Linear Regression, Logistic Regression, K-Nearest Neighbors, Decision Tree, Random Forest, Support Vector Machine(SVM), XGboost, PCA, K-Means, TF-IDF, Deep Learning |
| Database | MySQL, SQLite |
| Embedded Hardware | 8051, AVR, PIC, ARM, Arduino UNO, Arduino Mega, Raspberry Pi, Relay, Peripherals (LCD, Keypad, Sensors, Motors, Switches etc) |
| Embedded Software | Keil, AVR Studio, MicroC, Proteus |
| Protocol | SPI, I2C, UART, ADC, PWM, EEPROM, RF-Module, Bluetooth, Zigbee |

**WORK EXPERIENCE**

* Working for PBOPlus Consulting Service Pvt. Ltd., Delhi as Embedded Application Engineer from Jan, 2019 to till date.
* Worked for AAM Infotech Pvt. Ltd., Gurgaon as Software Engineer from Mar, 2017 to Dec,2018.
* Worked for TechieNest Pvt. Ltd., Jaipur as Embedded Engineer from Aug, 2016 to Feb, 2017.
* Worked for SOFCON Group, Noida as Embedded Engineer from Jul, 2014 to Jul, 2016.

**EDUCATIONAL QUALIFICATON**

* B.Tech in Electronics and Communication Engineering from Punjab Technical University, Jalandhar in 2014.
* Completed six months Embedded System Course in jan-14 to jun-14.
* Completed Machine Learning Course from Udemy and Coursera.

**PROFESSIONAL EXPERIENCE**

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| **Project – 1** | |
| Title | MACHINE HEALTH MONITORING OF PILGER USING PREDICTIVE ANALYSIS |
| Description | To predict and detection of potential equipment failures in pilger machine, and provides recommended actions to take. The system takes data from different types of sensors(Vibration Sensor, Pressure Sensor, Temperature Sensor and etc.) which attach with pilger machine. |
| **Project – 2** | |
| Title | AUTOMATIC GUIDED VEHICLE USING ROS |
| Description | The system acts as Material Transport Robot which can carry a payload from 50 kg to 200 kg with completely automatic guidance features with LIDAR for mapping and stereo camera for depth maps. The Robot features minimum turning radius - Automatic Obstacle Avoidance and Automatic System Health Monitoring. |
| **Project – 3** | |
| Title | ACCIDENT IDENTIFICATION & ALERTING BY TRACKING VEHICLE USING GSM & GPS |
| Description | The system acts as an accident identification system (Using Vibration Sensor & Accelerometer) that gathers and sends this vehicle information (location using GPS) that met with an accident, and conveys it to the nearest control room using GSM Modem. |

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| **Project – 4** | |
| Title | IoT BASED WIRELESS PATIENT HEALTH MONITORING |
| Description | Our system puts forward a smart patient health tracking system that uses Sensors to track patient health and uses internet to inform their loved ones in case of any issues. Our system uses temperature as well as heartbeat sensing to keep track of patient health. The sensors are connected to a microcontroller to track the status which is in turn interfaced to an LCD display as well as Wi-Fi connection in order to transmit alerts. If system detects any abrupt changes in patient heartbeat or body temperature, the system automatically alerts the user about the patient’s status over IOT and also shows details of heartbeat and temperature of patient live over the internet. Thus IOT based patient health tracking system effectively uses internet to monitor patient health stats and save lives on time. |

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| **Project – 5** | |
| Title | VEHICLE THEFT DETECTION/ NOTIFICATION WITH REMOTE ENGINE LOCKING | |
| Description | The microcontroller is interrupted when someone tries to steal the vehicle and the command is sent to the GSM modem to send SMS. On the receipt of the message, the owner sends back the SMS to the GSM modem. This is done in order to stop the engine. This GSM modem is interfaced to the microcontroller. This microcontroller on the receipt of the message uses a mechanism that helps to stop the engine. | |

**Project - 6**

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| |  |  | | --- | --- | | Title | Face Recognition and Authentication | | Description | Face recognition model using opencv, openface and dlib. It detect the face and gather the data to train the recognizer model and detect the face. This all done by VGG19 and getting accuracy 87.43% | |

**Project – 7**

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| Title | Recommendation System for Travel |
| Description | Designed and developed travel recommendation system using pySpark. Used supervised learning to build recommendation model using Collaborative Filtering.Used Facebook Checkin Data of a user to provide dynamic recommendation about travel with users changing interest. |

**DECLARATION**

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

**DIWAKAR PAL**