

Dwarakanath Varunkumar A

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PROFILE SUMMARY

- I have total 4.2+ year of experience in industry, where 2 year of experience in automotive manufacturing company, automotive components, design and development, prototyping, CAD, assembly and production.
- 2+ year of experience in design, development, analysis, UI design, Industry 4.0 (IIoT) communication, Thingworx and cloud Technologies, Presale and client Technical interaction.
- Creating POC for the Client based on Client requirement, In Agile way and handled overall project coordination.
- Experienced in Pre-Sale Documentation and estimation of project timeline and cost estimation.
- Hands on experience in Creating Web based application using Thingworx studio and other support technologies.
- Hands-on experience with Aras PLM in PACE lab and formulated functional structure for operation.
- Hands-on experience with "Predictive maintenance" framework for IIoT systems also carried out Vibration Analytics and enabled continuous monitoring.
- Presented research paper titled "A comparative study on Impact analysis of a projectile on a body armor" held at "Osmania University".
- Presented research paper titled "Predictive Analytics Based Maintenance for Industrial Pump" held at "PSG College of technology".
- Successfully organized symposium events at S.A. Engineering College.
- Presented research paper titled "Electromagnetic Forming Process" held at "SRM University".
- Presented research paper titled "Robotics in Automotive" and won the title best presentation, held at "Sri Venkateshwara Institute of Science and Technology".
- Constructed a robot for an inter college competition in Anna university.

EDUCATION

Course	University/Board	College/School Name	Year of Passing
M.E Product Design and Commerce	Anna University	PSG College of Technology, Coimbatore	2018
B.E Mechanical	Anna University	S.A. Engineering College, Chennai	2014

CERTIFIED COURSES

- Master Diploma in Automotive design.
- Completed robotic course in Carnegie Mellon University through distance education.

SKILL SET

Languages	C, C++, Python3, C#, Java
Web technologies	HTML5, CSS, Bootstrap, Java scripting, Node JS, Angular 7
Back Ends	Oracle SQL , MSSQL, NoSQL
Tools and IDE	Thingworx Studio , Thingworx Analytics, Kepserver EX, Spyder, Jupyter Notebook, Tableau, NetBeans, MS Visual Studio, R-Tool, MS Visual studio Code
Cloud Platform	Microsoft Azure,
Design Packages	AutoCAD, Creo, Autodesk Inventor, Nx CAD /CAM, Solidworks
Analysis	ANSYS
Simulation/ Rendering	Autodesk 3ds Max, Unity 3D,Vuforia
Environment	Windows, Linux- ubuntu 16
Other skills	Prototyping, Sketching, Team management, Pre sales, OPC , OPC UA

WORK EXPERIENCE

1. Redeem Systems Pvt Ltd, Bangalore

September 2018 – Till date

Designation: Senior Engineer

Roles & Responsibilities

- Requirement Gathering and provide suitable solution for the client.
- Based on Client Requirement New Product development plan is to be formulated.
- Creating proof of concept for the projects and ensuring its functionality and costing are in the scope. Design and Development of application.
- Involved in Presales activity and handled client for verticals like IoT and AI based projects.
- Manage and maintain Thingworx Server, manage version, Data migration & backup
- Resource assessment and work distribution to various Team members Project coordination.
- Integrating and Implementation of new technology to achieve the required functionality.

Technologies: Thingworx ,Thingworx Analytics, creo, Ansys, Python 3- LSTM, RNN, SVC,CNN,NLP,QT, Flask, Embedded C –WiFi, BLE, MQTT, Cloud, Unity, REST API, RFID, C#, .NET, NoSql, SQL DB ,Node JS ,Linux , windows , HTML ,CSS ,Java script, Apache Kafka , spark, Angular,

Projects:

1. Digital transformation of Manufacturing unit inventory management

The proposed model was Using RFID based solution for Asset management using Web Technologies

Roles: Development of web based communication and Hardware Interactions, Overall project coordination.

Technologies: Thingworx, C#.net, RFID, Python, Java script, CSS, MSSQL

2. Digital transformation of Manufacturing Unit Dust collector controlling

The proposed model was Using Web based control and governing methodology

Role: Over all solution architect, Design and development of device, interaction between hardware and web application development, web application UI design.

Technologies: Thingworx, Java script, CSS, Embedded C, Python , Postgresql

3. Commercial - Refrigeration Monitoring and Controlling

The proposed model was using Refrigeration monitoring device which is designed and developed in house which will tap the Real time data using Rest API call, and Will be visualized using web application and android application.

Role: Over all solution architect, Design and development of device, interaction between hardware and web application development, web application UI design.

Technologies: Thingworx, Java script, CSS, Embedded C, Creo , Postgresql

4. Fleet management system

Monitoring and calculating overall efficiency and cost calculation

Role: Overall Project coordination, web application UI design and development.

Technologies: Azure, Java script, CSS, Embedded C, Thingworx ,Nosql

5. Windmill Monitoring and alert creation

The proposed model was Using Web based governing methodology and alert triggering in case of any emergency.

Role: Over all solution architect, web application UI design and development.

Technologies: HTML, CSS, BOOTSTRAP, Angular 7, Node JS, Java script, CSS, Embedded C,

6. Digital transformation of Manufacturing unit VMC and CNC machinery

The proposed model was Using Web based governing methodology and alert triggering in case of any emergency. Calculating OEE and time etc.,

Role: Over all solution architect, web application UI design and development, Interaction with legacy machine and developed web application for computing and visualization

Technologies: Thingworx, Kepserver EX , OPC ,Thingworx Analytics, Java script, CSS, Embedded C , Python3 ,Nosql

7. Smart Device monitoring

The proposed model was using plug and play monitoring device which is designed and developed in house which will tap the Real time data of power consumption and duration of consumption, using WiFi technology and MQTT protocol data transfer occurs, visualized and dashboard is done in web application and android application.

Role: Over all solution architect, web application UI design and development of web application and hard ware communication.

Technologies: Thingworx , Thingworx Analytics , Java script ,CSS , Embedded C , Python3

8. Maxbyte Technology, Coimbatore

August 2017 - MAY 2018

Designation: INTERN

Roles & Responsibilities

- Pump Design Process, modelling is done in Inventor and Analysis is done using Ansys
- Predictive analytics Algorithms in R Software, Python, Thingworx.
- IIoT Connectivity, Dashboard (UI, UX design) for Industry 4.0 and Augmented Reality Enabling

Project:

Development of Predictive Maintenance (PM)framework for Industrial Fluid System

PM is designed and deployed for fluid system using machine learning and reliability techniques. Time to failure is obtained.

Role: Design and development

Technologies: Thingworx Studio, Thingworx Analytics, Reliasoft , creo, Ansys, Python 3-LSTM, RNN, SVC, Embedded C –WiFi, MQTT

9. M S Global India Automotive Pvt Ltd, Chennai

November 2015 - August 2016

Engineer Apprentice Trainee

Roles & Responsibilities

- Based on customer's requirement new Production plan is formulated, PPAP.
- The quality of the production parts in assembly and stamping line is checked for its dimensional correctness and reported to manager.
- Handling and ensuring correctness of reports like FML, drive check, TIP dressing and tip changing etc.
- Ensure proper 3C and 5S is carried out and Involving in development activity for improving production and shop floor.
- Work study, motion study and improvement in work process and ensure safety during work.
- Over all team management and ensure to achieve production plan.

10. Srimarg Human Resources Pvt Ltd, Chennai

July 2014 - November 2015

Line In-charge (Contract- Deputed in M S Global India Automotive Pvt Ltd)

ACADEMIC PROJECT WORKS

- PG Project 4 months 2018

“Service and Maintenance System using Aras PLM”, This project is for a Confidential Company, Implementation for service and maintenance persons they can login and check, updates and current status of the material availability person’s availability status of the clients and customer feedback in single system. Contribution / Highlights: Requirement Gathering. Preparation of Design documents and Implementation work flow (structure tree). Creating the solution for the Mobile Client. Testing the User Cases their privileges. Configuring the ARAS PLM according to Companies Business processes. Process flow for BOM, stock status. Database maintenance and monitoring on regular basis. **Technologies:** Aras PLM, SSMS, MS visual studio, windows server
- PG Project 2 months 2018

“Accreditation Process Digitization using Aras PLM for Education System”, This project is for automobile Department PSG college of Technology, the main focus of this project is to automate documentation process and simplify Accreditation process. This is an End to End implementation.

Technologies: Aras PLM, SSMS, MS visual studio, windows server
- PG Mini Project 4 months 2017

“Designing of Multi Terrain Trolley Bag”, Design and development of trolley bag which is capable of moving in all terrain like stair and rough surfaces without hurdle.

Technologies: Creo
- PG Mini Project 4 months 2017

“Economic Analysis on Heat Sealer”, Analysis of technical and market feasibility based on geographical location and government norms.

Technologies: Autodesk 3d inventor, survey, MS- excel
- PG Mini Project 6 months 2017-2018

“Impact Analysis of a Projectile on a Body Armour”, Nondestructive testing of body armor material using dynamic analysis technique.

Technologies: Ansys workbench (dynamic analysis)

- PG Mini Project 4 months 2017

“Ergonomic Consideration of Push and Pull for Trolley Bag Handle”, Ergonomic evaluation and design improvement of trolley bag handle by using Electromyography (EMG) and Human evaluation charts.

Technologies: LAB VIEW, RULA/REBA, CATIA

- PG Mini Project 4 months 2016

“Geometric Cad package using CPP”, Basic CAD Package using CPP graphics header files

Technologies: C++, Geometric equations, Algorithms

- UG Project 5 months 2014

“Performance Analysis of Automobile Radiator by using Nanofluid based Coolant”, Experimental analysis on an automobile radiator by using nanofluids based coolants and comparative study with theoretical results Improve radiator efficiency by 5 degree Celsius.

Technologies: Ms Excel

- UG Mini Project 4 months 2013

“Magnetic Hydraulic Turbine”, Hydraulic turbine is coupled with magnetic disc to enhance the productivity of the turbine. change in efficiency output power is accounted.

Technologies: Nx cad /cam

INPLANT TRAINNING AND WORKSHOP

Ford India Pvt Ltd- Chennai	Gained knowledge about process planning and production flow process in manufacturing of ford fiesta and varying quality standard.
Fenner India Pvt Ltd - Chennai	Gained knowledge about process optimization and supply chain management.
PACE Lab, PSG College of Technology -Coimbatore	Attended lecture on Teamcenter PLM and used PLM software in PACE Lab. Used Teamcenter framework and modules in it.

PERSONAL DETAILS

Language known	English, Tamil(native), French (read and write)
LinkedIn	www.linkedin.com/in/dwarakanathvarunkumar
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Passport Validity	17/07/2026

Yours Truly,

A. DWARAKANATH VARUNKUMAR