



Tilak

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SUMMARY

- 3 years experience in implementing various mechatronics systems, automating systems, software design, deployment, testing and implementation.
- Extensive experience with programming in LabVIEW.
- Significant Experience with programming micro controllers using Arduino, Keil IDE.
- Experience with programming PLC's using Zelio Soft V2.0, Picosoft, SIMATIC STEP 7 and Automation Studio.
- Experience in developing various mechatronics systems like controls for M-15 Gas turbine testbed, vending machines and automated test equipment.
- Experience with version control including git.
- Rudimentary experience with SQL Server 2008 and MySQL.
- Rudimentary experience in developing GUIs and windows services in .NET framework using C#.net.
- Hands on experience in database connectivity using ADO.net and Entity framework 5.0.
- Rudimentary experience with HTML and CSS.
- Strong and influential communication and interpersonal skills with efficacy in follow-up and leadership roles.
- Highly motivated with a drive to take up challenges and put problem-solving to effect in a dynamic environment.
- Good understanding of design patterns.

SKILLS

Controllers	PXI, 8051, ATMega2560, Raspberry Pi, PLCs
IDE	LabVIEW, Matlab and Simulink, Scilab, Maxima, Robotic Development Studio, Visual Studio, IDLE
Meta Operating System	Robotics Operating System (Package development)
Database Management Systems (DBMS)	Microsoft SQL Server, MySQL
Communication Protocols	RS232
Version Control	Git, SVN

EDUCATION:

- B.E Mechatronics 2005-2009 Vinayaka Mission University
- M.Tech Mechatronics 2012-2014 VIT University

WORK EXPERIENCE:

Student & Technical Consultant | C.P.D.O (NR) & VIT University | June 2012-October 2013

Project: Egg Vending Machine

Designed, developed and fabricated an egg vending machine for Central Poultry Development Ministry of Agriculture and Fisheries tied up with VIT University. This vending machine was based on five new



mechanisms unique to vending machine. This was built primarily for the government with the idea to empower the farmer to use this machine to vend their own product. This vending machine is first of its kind and is operable in less than 350 Watts with a storage capacity of 600-720 eggs and can dispense any packaged product weighing 1kg. Currently the government of Chandigarh has shown interest to install 200 such machines are being remodeled for industrial implementation.

Key Roles performed:

- Programmed the entire working mechanism.
- Developing controls architecture for the system.
- Decision making for implementation of the mechanisms.
- Managed the complete project.

Asst. Project Manager & Project Lead | Aniba Solutions Pvt. Ltd. | Aug2010-September2011 Project: M-15 Gas Turbine Assembly for Eastern Naval Command.

M-15 Gas turbine assembly is operated on board 1241-RE class ships of the Indian navy. The development of the testbed for these engine is done at INS Eksilla, Vishakhapatnam. In this project we had to develop new control system for the boost and cruise gas turbine engine and its support systems and generate reports. We developed the controlling and monitoring the system using NI LabVIEW, DSC module & NI Hardware.

Key Roles performed:

- Conceptualized the developed the POC for M-15 Gas Turbine Test-bed control system for the Eastern Naval Command.
- I was responsible for programming, designing and managing the entire project on site.
- Development of the throttle controller for the boost engine in M-15 GTA. This system was exclusively my design and was a completely new system used for throttling the fuel to the boost gas turbine engine.
- Development of Data logging system and Operator warning system using a PXI for the support systems of the test bed: Cooling water system, Fuel system and Lubrication Oil system.
- Costing of the entire Controls for the M-15 GT Testbed Project.

Manager Test Bed Controls | Rites Ltd | July 2009-July 2010

Project: M-15 Gas Turbine Assembly controls for Eastern Naval Command.

RITES was consulting for the development for all the monitoring test bed development work for Eastern Naval command. A part of this was to monitor the work done by the development by Ultra Dimensions Pvt. Ltd. Maintain quality and consult for the project development. RITES was also responsible for developing the technical specifications for the navy and make amendments to the DPR (detailed project reports).

Key Roles performed:

- Modifying technical documentation of the testbed system and its controls.
- Monitoring the progress of the controls work in INS Eksilla.
- Finalizing the work specifications for controls.
- Checking design flaws in detailed project report.



Intern | National Instruments | Dec 2008-Jan 2009

Key Roles performed:

- LabVIEW support work at NI.

Other Projects:

- 3DOF Tele-operated robotic arm.
- Hexapod
- PXI Based Automated test for thermal cyclic fatigue for ceramic plate
- Underwater ROV.
- Underwater image processing using Scilab.
- Camera stabilization for unsteady vehicle.

Patents Filed:

- Smart poultry incubator for enhanced hatchability through computational (4440/CHE/2013).
- Accessible Bio- Telematics device for personal healthcare management (4439/CHE/2013)

Awards and recognition:

- National Award from the Ministry of Agriculture and Fisheries for developing an egg vending machine.
- First prize for a research paper in “International Science Engineering and Technology” (SET) conference at VIT University.
- Runners up at IIT-M (Indian Institute of Technology Madras) for MAID (Mechanized Assistant for Indian Domestic) in Golden Design Challenge.
- Bronze prize for presenting a paper on UUV (Unmanned underwater vehicles) in SAE Tier II.
- Gold medal for aero modeling SAE Tier I.
- Gold medal for paper presentation on ROV (Single propeller driven ROV Underwater) SAE Tier 1.
- Selected as the student ambassador for “Kurukshetra” Tech Fest at Anna University.
- Participated in Google Aptitude Challenge.

Publications:

- SET conference paper on *“Synergistic integration of a gyro setup to unsteady vehicles camera resulting in image stabilization”*.
- SET conference paper on *“Study and experimentation of Robotics operating system and its implementation on 3 degree of freedom robotic arm”*.
- Coverage for India’s first egg vending machine in news daily Amar Ujala, Indian Express , Punjabi Tribune ,ABP news and Zee news.
- Written an article publications about Poultry Automation in Poultry express, Poultry fortune.

Communication:

- I can converse fluently in English, Hindi, Oriya, Tamil and Kannada.