Lokesh Vasantha
M Tech
Signal Processing
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ACADEMIC DETAILS

Examination	University	Institute	Year	%
Under Graduate Specialization: Graduation	*Elec. & Com. Engineering* JNT University Ananthapur, AP	SVEC Tirupati, AP	2006-2010	73.73
Post Graduation M Tech (Signal Processing)	IISc Bengaluru	IISc Bengaluru	2020-2022	CGPA :8 (upto first sem)

FIELDS OF INTEREST

- Data Acquisition, Statistical Signal Analysis, Signal & Image Processing, Data Processing & Analysis, Control System Design and System Automation & Testing.

TECHNICAL SKILLS

- **Languages** (C), **Scripts** (Python, MATLAB, LabVIEW).

- **Tools** (MATLAB-Simulink, Zuken E3, LaTeX).

- **Skills**(Model based design, designing automated test equipement, Good debugging skills).

MAJOR PROJECTS

- **Assessing Quality of Mesurement System Using Key Performance Indices(KPI)** (Research Project) *(January(2020) - March(2020))*
  - Development of algorithm for obatiaing KPIs.
  - Developed LabVIEW based application software for the alogorithm and validation.
  - Benchmarking the meaurement system peroformance parameterwise and assessing quality of data.

- **Design & Development of Automated Test Equipement** (Research Project) *(January(2019) - September(2019))*
  - Development of NI based automated test equipement for testing LRU.
  - Development of test harness and automated test report generation module.
  - Developed LabVIEW based application software to test LRU with self testing capability.

- **Data Acquisition System Developement** (Research Project) *(August(2017) - April(2018))*
  - Selecting and integrating data aquisition hardware for aero engine testing.
  - Selection of appropriate Sensor & signal conditioning Hardware.
  - Developed LabVIEW based application for different modes of testing.
  - Developed offline test data analysis application using LabVIEW

- **Design & Developement of Power Regulation, Generator Control & Switching System** (Research Project) *(January(2018) - February(2019))*
  - Did system requirement specification analysis
  - System simulation and analysis
  - Hardware design and fabrication.
  - Hardware in loop simulation.
  - Qualification & acceptance testing.
  - Generation of test procedure, ICD & design documents

- **Design & Developement of ATE for Rocket Subsystem Testing** (Research Project)*(May(2015) - April(2016))*
  - Designing and integration of hardware

- ○ Developement of application software.
- ○ Testing and deployement for the application.

- • **Developement of Safety Critical System for Propallent Filling to Different Launch Vehicles of ISRO** (Research Project) *(March(2015) - December(2016))*
  - ○ Explored the basics of Fuel and H/M systems.
  - ○ Explored the basic methodology of fuel filling.
  - ○ Developed application software in C
  - ○ Genertion of test cases, static and dynamic aplication software testing.
  - ○ Gained expertise on distributed automated control system application, testing & deployment.

- • **Development and Validation of Automated Script for Model Order Reduction** (Research Project) *(January(2019) - April(2019))*
  - ○ Development of MATLAB script model order reduction.
  - ○ Verification and validation of the script with standard model order reduction techniques.
  - ○ System integration requirements preserved.

- • **Mathematical Analysis of Engine Shaft Bending Modes & Frequency Analysis of Pressure Waves of Rotary Blisk** (Research Project) *(May(2019) - July(2019))*
  - ○ Study of Engine shaft dynamics and deriving a Differential equations.
  - ○ Simualtion of ODEs in MATLAB and analysis with engine test data.
  - ○ Theoritical study of Dynamics of Rotary blisk.
  - ○ Mathematical analysis for finding frequencies in pressure wave generated by rotary vibrating Blisk.
  - ○ Experimentation of bladed disk for validating theoritical results.

MAJOR ACHIEVEMENTS

- ○ Ranked 16 in merit list of Electronics discipline of ISRO Scientist recruitment 2015.
- ○ Ranked 59 in GATE 2016 in Electronics & Communication Engineering.
- ○ Ranked 37 in merit list of all desciplines of DRDO Scientist recruitment 2017.

ROLLS & RESPONSIBILITIES

- ○ **Gas Turbine Research Establishment, Bengaluru, DRDO** (Scientist C)
  (June 19, 2017 - till date)
  - ∗ Providing technical support to the projects.
  - ∗ Giving ideas and technical feedback.
  - ∗ Providing technical assistance in automated testing.
  - ∗ Development of power electronic systems and qualification.
  - ∗ Development of automated data acquisition and control system.
  - ∗ Sensor data analytics, Engine health monitoring.

- ○ **Satish Dhawan Space Centre, Sriharikota, ISRO** (Scientist SC)
  (March 23, 2015 - March 31, 2017)
  - ∗ Designing distributed automated control system.
  - ∗ Failure analysis and technical feed back.
  - ∗ Verification and validation, reliability analysis.

- ○ **KKC College of Engineering, Puttur, Andra Pradesh**(Teaching Asst.)
  (June 2010 - June 2014)
  - ∗ Teaching core electronics and communication engineering courses.
  - ∗ Guiding students in laboratory and in their projects.
  - ∗ Handling technical events.