

## EDUCATION

- **The University of North Carolina at Charlotte** – Charlotte, NC May 2022  
Master of Science: Mechanical Engineering (GPA: 3.5/4.0)
- **Gujarat Technological University – Ahmedabad, India** June 2016  
Bachelor of Engineering: Mechanical Engineering (GPA: 3.3/4.0)

## SKILLS

- CONTROL TOOLS: NI LabVIEW, I&C Design, RSLogix 5000 for Allen Bradley PLC, HMI Design, SCADA  
DESIGN TOOLS: AutoCAD 3D Mechanical, AutoCAD 2D Electrical, SolidWorks, CATIA, Inventor Fusion  
QUALITY TOOLS: Six Sigma, PFMEA, DFMEA, 5Whys, Ishikawa (Fishbone) Diagrams, BOM, 8D Approach  
CODING TOOLS: MATLAB, Simulink, C, C++, Embedded C, Python  
OTHERS: Microsoft Office, Access, Project, Adobe Design Suite, Eagle PCB Design

## EXPERIENCE

**Measurement Controls, Inc. – Charlotte, NC** Current  
*Calibration Technician*

- Testing, Measurement and Calibration of Remanufactured Natural Gas Meters ranging from residential to industrial meters using automated systems and following lean processing methods

**Integral Analytics LLC – Charlotte, NC** 2 months  
*Mechanical Engineering Research Intern*

- Worked as researcher using Machine Learning & Regression Tools including MATLAB & Python 3 to develop predictive analytical models for M&D (Monitoring and Diagnostics) Program applied to a natural gas power plant operation
- Developed and Processed Databases from raw data to refine output data using regression tools

**TE Connectivity (via Aerotek Staffing) – Greensboro, NC** 6 months  
*Manufacturing (Automation) Engineering Intern*

- Extensively used NI LabVIEW Programming Environment to create **FPGA-Based** Real Time Process Analysis & Closed Loop **Control Systems** with dynamic **Human Machine Interfaces (HMIs)** and Remote Network Access to establish a proposal for distributed control system (DCS) over long term
- Integrated an array of electrical sensors and actuation systems alongside customized instrumentation **program logic** to achieve required control algorithm patterns for seamless automation of manufacturing process; Moisture content was controlled with an accuracy of 100 PPM in an active production line to **save \$65,000** in product waste reduction costs
- Worked on **cost-benefit analysis** studying existing robotic system and using **5WHYs** method to analyze present production line, locate active delay & product loss sources, and proposals to upgrade them from multi-year data, with proposed financial savings upwards of \$150,000 over break-even period

**William States Lee College of Engineering – UNC Charlotte** 6 months  
*Electromechanical Engineering Teaching Assistant*

- Instructed instrumentation fundamentals to undergraduate students on a multitude of sensors, signal processing, actuator control, PID systems & data acquisition with extensive use of LabVIEW, MS Excel & MultiSIM
- Oversaw lab workshop sessions training students to use schematics, closed loop systems design, accelerometers, encoders, DAQ systems, alongside devices like oscilloscopes, multimeters, signal generators, soldering machines; also taught circuit design

**Rowe Arts Digital Fabrication Lab (RoFL) – UNC Charlotte** 1 year 6 months  
*RoFL Support – Lab Technician*

- Oversaw various **Rapid Prototyping Tools**: FDM 3D Printers, Stereolithography Printers, Laser Engravers and Laser Cutters, CNC Machines, PCB Milling machines
- Tutored students and faculty on usage of equipment and conducted workshops pertaining to Digital Fabrication

**Ashish Enterprises – Ahmedabad, India** 9 months  
*Mechanical Design Intern*

- Designed and drafted 2D Model Drawings based on project requirements & design considerations
- Assisted in design of industrial refrigeration systems to meet requisite cooling potential of 50-400 ton of refrigeration (TR)
- Developed Bill of Materials (BOM) for projects as required by supervisor from parts sourcing, cost estimations, labor, etc.

## PROJECTS

- Electrical System Design & for SAE BAJA 2015 All-Terrain Vehicle (ATV)
- Mecanum-Drive Robotic System with Machine Vision and Sensor Fusion
- Design & Development of Dynamic Ultraprecision 3-Axis Accelerometer using Optical knife edge system
- Dynamic Electromagnetically Actuated Flexure Stage for Micro-Displacement Control
- Autonomous Self Navigating Intelligent DaNI Robot with obstruction detection
- Prototype of Wireless Motion Capturing Digital Knee Sleeve
- Demonstration of 3D Printed Artifacts for Circle Diamon Square Test for CNCs
- Implementation of Automated Manual Transmission in Two Wheelers
- Prototype of Portable Conveyer Belt Based Load Lifting Mechanism