Moizuddin Shah

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Education

TEXAS A&M UNIVERSITY | MECHATRONICS/MULTIDISCIPLINARY ENGINEERING MAY 2023

- Minor: Embedded Systems Integration
- GPA: 3.4

Experience

CONTROLS AND AUTOMATION ENGINEER | NABORS DRILLING USA OCT 2023 – AUG 2024

- Supported and maintained automated rough neck and pipe handling RZR systems on Nabors rigs.
  - Reduced drill string well insertion time by 20% compared to average
  - Reduced drill string extraction time by 35% compared to average
- Performed software upgrades, network troubleshooting, and hardware installations for rig **HMIs, IPCs,** and **PLCs** on **Allen Bradley, Rockwell,** and **Siemens** hardware
- Installed **Machine Vision** hardware for RZR-lite system upgrades on rigs and connected components to rig network and electrical cabinets
- Imaged, configured, and installed servers for Nabors Automation Software and Equipment products on rig floor and man camp

AUTOMATION INTERN | BECKHOFF AUTOMATION JUN 2023 – AUG 2023

- Designed automated parking ticket validation system for Houston office utilizing **TwinCAT Machine Vision**, **Python,** and **Beckhoff IPC**
- Designed Ping Pong robot for Houston office utilizing **Beckhoff IPC**, **PLC**, Beckhoff servo drives, **TwinCAT Motion**, and **Structured Text**

Projects

AUTOMATED STRIKE-BALL BASEBALL SYSTEM

- Successfully designed a prototype system to make judgements about baseball strikes and balls for The Lab at Hustle3
- Utilized **Machine Vision** to track baseballs and define a strike-zone within 3D space
- Developed and deployed system on a **Linux** based developer kit

METAL DETECTION ROBOT

- Designed a metal detecting robot that used LiDAR to navigate surroundings while searching for objects.
- Designed and **Soldered** a simple metal detector PCB for robot to utilize
- Programmed PID control for motors and obstacle detection with **Python**

EMG PAC-MAN CONTROLLER

- Designed an electrical instrumentation system and program to use electromyography to control a game of Pac-Man via muscle contractions.
- Utilized an **Arduino Nano** for the computational unit **programmed in C,** and local machine programmed with **LabVIEW** to interpret data

Skills & Abilities

- Lean Six Sigma Yellow Belt Certified
- Bash, C, C++, Java, Python, Python Machine Learning, RTOS Programming, Structured Text
- Bilingual – English and Urdu
- GNU/Linux server creation and management
- NI LabVIEW, Multisim, TwinCAT 3, TwinCAT Motion, TwinCAT Vision
- Soldering