**Burn Removal Machine:** This was an end to end design for an automobile components manufacturing company in Bangalore. The purpose of the Special purpose machine (SPM) is to remove the extra protruding material after the component is manufactured this process is called components bur removal.

**Gear Box Assembly Line Automation:** Scope of the project was to design PC based software that can communicated over Ethernet to PLC and control the full automation of the gear box assembly line. There were six stations and each station input and output needs to be managed simultaneously where input of one station acts as input to next station. This was a full featured C# based project that was designed end to end upto the quality test of the manufactured wind mill gear box.

**Multi Axel Alignment system:** The scope of the project was to design the electrical panel, PLC programming and building an intelligent C# based computer application that can control the Multi Axel alignment system. This C# Application all the required intelligence to control the operation of the SPM, calibrating the axel initiating the required alignments and generating the final report. This SPM is fully automated with an single operator button press the SPM works in Dual synchronous mode. This SPM was developed for Indian Multi Axel truck Manufacturer.

**XY Table:** This was an end to end product design for an very reputed University for checking the quality of the photo cells that they manufactured for god particle collusion. We were responsible for providing the design concepts and building the SPM end to end. We use C# for computer application and PLC on the electrical control panel. This was a high precision SPM with an accuracy of 0.01mm error.

**Single Axis Controller (SAC):**

This project was to design and develop a raspberry pi based single axis control to controller their rotatory table. Scope of the project was to communicated with the VFD driver through EtherCAT communication and control the various operation of the rotatory table in real time.