# Experience

***Artificial Intelligence Engineer***  
***Hiperdyne Corporation***  
  [*www.hiperdyne.com*](www.hiperdyne.com) ( July, 2019- Till Present)

$$\begin{gathered}
>> Implementation of state of the art Reinforcement Learning algorithms for solenoid valve position (Set Point) controlling using observing sensor values (Process Value) for Oil Refinery Plant. After more than a year of research and optimization, eventually the performance of the AI solution exceeded the performance of human experts in respective industry. The whole system relied on a MQTT sensor Network which made it dynamic and responsive. \\
>> AI based scoring system for optimal oil shipping plan selection. The industry had options for transportation ship, supply refinery with certain capacities and delivery port with varying demand. The system utilized the Inventory data (supply and demand) and Ship Schedules(Ship and available routes) and applying concepts of Q learning to predict long-run feasibility score for for each plan at a certain inventory status.\\
>> Early prediction of "After Burn" phenomenon level in refinery from sensor Values using Deep Learning based techniques, for taking early measures to benefit production.\\
>> Deep Learning based dimensionality reduction techniques have been applied to high dimensional sensor values to produce 2 dimensional output. this lower dimensional output was used to plot and visualize latent space of interest that showed the transition of the production phase and helped the operator to take necessary measures much earlier.\\\end{gathered}$$

***Jr. Research Engineer (Product development and Research Dept.)***  
***Pi Labs Bangladesh Ltd.***   
  [*www.pilabsbd.com*](www.pilabsbd.com) ( August, 2017- September, 2018)

# Mars Rover Challenge

# Machine Learning Project

# Robotics Project

# Education

# Academic Project

# Co-Curricular activities

# Publications