



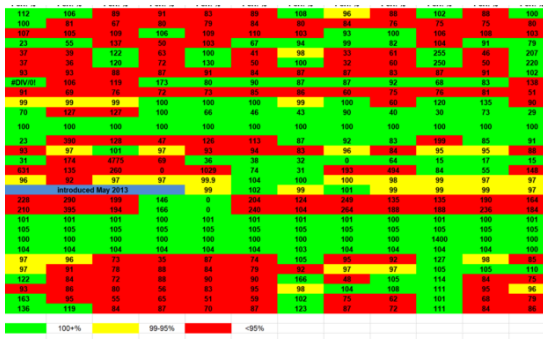
# Data Science for Performance Improvement & Innovation at DCP



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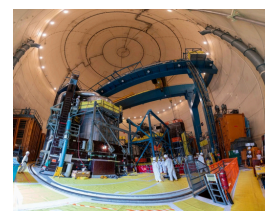
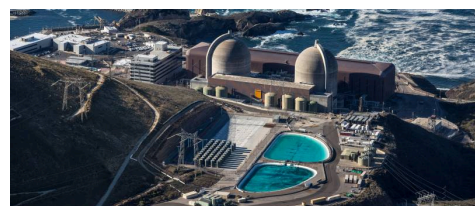
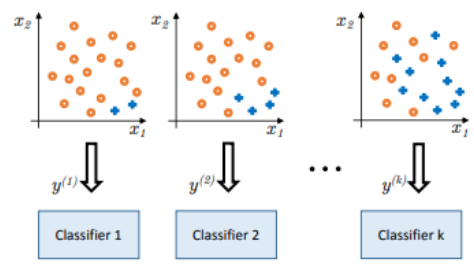


After plant operations were relicensed and DCP was granted extended operations, the Performance Improvement & Innovation department was formed. This department is in charge of bringing new technologies, innovations and ideas bringing new opportunities for efficient improvements across the organization. I worked with this team to implement new strategies and enhance the plant's performance.



My main project involved enhancing the quality verification department's observation processes that aligns with the company's lean strategy related to visual management (PowerBI) and waste elimination. Utilizing PowerApps, PowerBI and other data science tools I helped integrate a site observation database. This optimized QV's processes covering 456 critical QV processes. These modifications result in elimination, saving hundreds of man hours a week to meet QV implications. Additionally, this allowed for easier data retrieval from the database, binning, and input to PowerBI for enhanced visual management including metrics and trending capability. I am proud to leave something tangible that will support our plant's operations for years to come.

Another focus of implementing innovation to DCP's operations was to establish a pathway between a corporate pipeline for an AI process and bring it to the nuclear side of things. DCP is looking for established connections with the Data Science Center of Excellence. This included using a LLM with recurrent neural networks to enhance pattern recognition, find developments that might otherwise go missed and overall improve human performance at the plant. This model has the ability to analyze over 10,000 documents using 10+ years of historical data, and improves trend analysis of critical observations.



Overall, my experience at DCP involved maximizing innovations, attending meetings, and networking with professionals who provided me with knowledge and learning about data science and the nuclear industry. Safety was vastly emphasized and integrated into the working processes and culture here. In order to elevate the impact of my projects, I also toured various parts of the plant to get a first hand understanding of nuclear operations and practices.