# Patrick C. Page

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## Objective

A highly motivated engineer and data scientist who is looking to transition into the renewable energy field and has 4 years of experience as a digital manufacturing engineer who deployed and managed the data collection of machine asset data and product quality data for advanced turbine manufacturing factories.

## Education

*Purdue University, West Lafayette, IN* *August 2015 – May 2019*
Bachelor of Science in Mechanical Engineering

*IUPUI, Indianapolis, IN* *August 2021 – August 2023*
Master's Degree in Applied Data Sciences

Skills: OPC UA Server Management, Python, Apache PySpark, Power BI, Tableau, R, PLC Programming, RDBMS, NOSQL, Google Earth Engine

## Work Experience

*Rolls-Royce Digital Manufacturing Engineer* *June 2019 – Present*

- Deployed and managed an OPC UA Server that collected data from machine controllers, automated equipment, and sensors from various manufacturing plants to optimize machine utilizations, monitor machine health, and ensure key process variables were within specifications
- Project managed a team consisting of engineers, electricians and IT personnel to install PLCs in legacy machines to capture stack light signals for machine utilization data collection
- Interfaced with network IT to ensure networked devices could communicate across VLANs so that data could be collected from a centralized server
- Maintained the statistical process control (SPC) software tool and related RDBMS to store and view product measurement data which helped manufacturing engineers determine process inefficiencies and quality issues
- Created an automated data import system using Python to process data from measurement machines and import the data into a SQL Server where the data could be viewed in the SPC tool
- Developed business intelligence dashboards using Microsoft's Power BI and IBM's Cognos platforms to monitor machine utilization rates and track parts on the shopfloor to determine process bottlenecks

## University Projects

*Applied Data Science Master's Program Projects* *August 2021 – August 2023*

- Developed a cloud computing pipeline using Apache PySpark to process unstructured data using natural language processing and predicted outputs using Spark ML functions
- Created a random forest classifier within Google Earth Engine to map out the tree canopy within Indianapolis and determine which areas of the city were in need of urban vegetation renewal
- Created a relational database for a hypothetical record label consisting of 11 tables that handle merchandise sales, record distribution, artist discographies, touring schedules, and employee details

*Senior Engineering Design Project – Pulse Flow Reverse Osmosis System* *October 2018 – May 2019*

- Worked in a team as part of Prof. Luciano Castillo's and Prof. David Warsinger's laboratories to create a pulse flow reverse osmosis system
- Developed the Supervisory Control and Data Acquisition (SCADA) utilizing a microcontroller to collect various sensor readings and to control the pump by means of a variable frequency drive (VFD)
- Wrote the Python code that was responsible for the data collection of the process sensors and the control of the VFD

## Volunteer Experience

- Planted trees for the Keep Indianapolis Beautiful, Inc initiative for urban vegetation renewal
- Assistant coached for a recreational youth baseball team