KÉLI DUGGAR

HOLLY RIDGE   **205-300-4948 (CELL)**
NORTH CAROLINA   **KELIDUGGAR@GMAIL.COM**

PROFESSIONAL PROFILE

Highly Analytical, Results-driven Data Scientist with 10+ years of global experience in process engineering and project execution. Currently pursuing a Master's in Data Science, building on a foundation in chemical engineering and complex system optimization, with expertise as follows:

- **Applies machine learning, statistical modeling, and data visualization techniques to real-world** datasets in manufacturing, healthcare, and finance; skilled in Python, SQL, and tools such as Scikit-learn, TensorFlow, and Pandas.

- **Maintains ethics in the evaluation, development, and use of data and predictive models**; **successful,** systematic understanding of project scopes; expertise in testing, deploying, and leveraging technologies

- **Excels in structured environments; organize, manage, create, preserve, and utilize data; define,** develop, and manage databases for information systems; self-directed in taking ownership of projects

- **History of major recovery-savings up to $200k within engineering projects, with a keen eye toward** profitability; support to multidisciplinary team leads for presentations, scope review meetings, and testing

- **Proficient in technical writing, producing training and operating manuals; collaborate with** multinational clients; relatable personality and lifelong learner interfacing with all levels in an organization

DATA SCIENCE & PROCESS ENGINEERING TOOLKIT:
- Programming, Data Analytics, & Data Visualization: Python (Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, TensorFlow, Keras, XGBoost), R, SQL, PySpark, NLTK
- Machine Learning: Logistic Regression, Random Forest, Gradient Boosting, Neural Networks
- Simulation & Engineering: Aspen HYSYS (Advanced), Aspen Plus, ProMax, Aspen Process Explorer, AVEVA PRO/II, Bluebeam
- Productivity: Advanced Excel, Word, PowerPoint, Visio, Minitab

EDUCATION

MASTER OF APPLIED DATA SCIENCE PROGRAM
SYRACUSE UNIVERSITY, SYRACUSE, NY   IN PROGRESS, 2023-2026

Selected Data Science Projects (Syracuse University):

Responder_6 Time-Series Prediction (Jane Street Kaggle Dataset)
- Applied supervised learning to a time-series financial dataset of 42M+ rows to predict a proprietary target variable ("Responder_6") up to six months into the future. Performed feature selection, handled data leakage risks, and trained regression models
- Tools: Python, XGBoost, Random Forest, PySpark
- Achieved R^2 score of 0.0129, close to the competition's top score of 0.0142.

Diabetes Diagnosis Prediction
- Developed a binary classifier to predict the presence of diabetes in undiagnosed patients using medical features. Evaluated models using confusion matrix, accuracy, and F1 score.
- Tools: Python, Logistic Regression, Random Forest, Gradient Boosting, Scikit-learn
- Achieved 92% accuracy and F1 score of 0.91 with Gradient Boosting.

Olympics Trends Analysis
- Explored and visualized 120 years of Olympic Games data, focusing on trends in athlete participation, gender representation, and medal distributions across countries.
- Tools: Python, Pandas, Seaborn, Matplotlib
- Developed visualizations to support data storytelling and trend interpretation

BACHELOR OF SCIENCE DEGREE IN CHEMICAL ENGINEERING
UNIVERSITY OF ALABAMA, TUSCALOOSA, AL   2013
- Completed co-op rotation at SABIC Innovative Plastics (Burkville, AL), working across multiple thermal plastics processing units (2010–2011).

CAREER OVERVIEW

FLAGSIN GROUP, LLC, CHARLOTTE HALL, MD   2023 TO PRESENT
PROJECT ENGINEER
- Interpreted exterior evaluation data to develop detailed scope documents outlining site-specific preparation and repair requirements

KÉLI DUGGAR

- Created annotated site drawings to estimate square footage and provide clear contractor guidance
- Synthesized technical findings and recommendations into concise written reports. Applied engineering judgment to adapt standards to non-standard site conditions, ensuring consistent quality and safety

ASCEND PERFORMANCE MATERIALS, PENSACOLA, FL   2021 TO 2023
PRODUCTION ENGINEER II

- Served as manufacturing representative for capital projects in support of adipic acid production for this industrial plant producing nylon. Aligned closely with corporate goals to increase profitability of the plant and blaze a trail in the nylon 6,6 value chain.
- Served as the sustainability liaison, manufacturing representative, and technical counsel, providing troubleshooting support collaborating with the Process Technology Group, Manufacturing Engineers, and Operations staff. Generated strategic ideas, gathered and analyzed process data, drove process optimization, generated data visualizations to communicate with managers, and consistently improved KPIs.
- Wrote test procedure, submitted for approval, and monitored production specifications. Coordinated with business groups to commence testing.
- Provided process design information for small capital and/or expense projects. Actively supported worksite safety initiatives, stable operations, and productivity (product yield) programs. Served as replacement in the absence of the Manufacturing Engineer.

ASCEND PERFORMANCE MATERIALS – ACCOMPLISHMENTS / KEY PROJECTS:

- *Productivity:* Supported efforts to increase and maintain unit yield, analyzing process data, monitoring and tracking KPI's daily. Scoped and supported projects to increase yield. Tracked and investigated monthly raw material usage variances, and tracked and drove maintenance items that effect yield parameters. Tuned control valves to eliminate instrument issues effecting yield. (2022)
- *Budgets & Cost-Savings:* Supported Manufacturing Rep for $30M Capital Project Commissioning and Startup, **realizing an annual cost-savings of $25M**. Collaborated closely with operations staff and engineer to coordinate operator training. Developed Operator Training Manuals. (2022- 2023)
- *Leadership*: Led development, organization, and execution of a series of Plant Test. Prepared test procedures, and assessed and mitigated test risk and product specification issues. Coordinated test preparation with Operations and Technology groups and monitored KPI's during test and analyzed test data, **realizing an annual cost-savings of $150k.** (2022-2023)
- *Capital Project*: Led scope development for project to recover material lost during periodic defrost of equipment. Collaborated with civil, mechanical, and electrical engineering groups to develop scope of work. Delivered +/-30% estimate and a **cost-savings of $200k**. (2022)

LUMMUS TECHNOLOGY, HOUSTON, TX   2013 TO 2021
PROCESS ENGINEERING SPECIALIST III (Promoted, 2019)

- Prepared basic engineering packages to meet client requirements for licensed proprietary gas processing and refining technologies. Performed detailed process design calculations and process design simulations in HYSYS, ProMax and Pro/II. Prepared equipment and instrument data sheets, process flow diagrams, and piping and instrument flow diagrams.
- Worked independently with minimal supervision as well as in collaboration with lead process engineer, colleagues and industry groups in gas and Fluid Catalytic Cracking (FCC) business units primarily.
- Reviewed design work of other process engineers as requested for accuracy of calculations and conformance to codes/standards, design criteria, specifications, and good engineering practices.
- Participated in start-up, operator training, technical service field assignments, performances tests, and client project scope review meetings, traveling domestically and overseas.
- Interfaced with multinational clients virtually, accommodating to time differentials. Took initiative in making decisions and problem solving within established procedures, guidelines, and engineering principles.
- Represented Lummus Technology as Presenter at Junior Achievement programs (2016, 2015, 2014).

KEY ACCOMPLISHMENTS / CAREER HIGHLIGHTS:

- **Co-Presenter, Gas Processors Association Conference,** Lummus Technology**,** Wrote paper and helped lead engineer prepare for presentation for licensed technology. (2017)
- *Operator Training Presentation Preparedness (2017) Co-Presenter and Operator Training Presentation Preparedness (2017, 2016) Team Lead, Performance Test (2016) Team Lead, Performance Test (2016)*

Excellent References Readily Available Upon Request

KÉLI DUGGAR

HOLLY RIDGE
NORTH CAROLINA

205-300-4948 (CELL)
KELIDUGGAR@GMAIL.COM

ATTENTION: HUMAN RESOURCES

I am writing to express my interest in a Data Scientist or related role within your organization. I bring over 10 years of experience in global process engineering and project leadership, combined with current graduate-level training in Applied Data Science at Syracuse University. My technical foundation in chemical engineering—paired with hands-on experience in machine learning and predictive modeling—positions me to drive actionable insights in data-rich environments.

Throughout my career, I have led high-impact projects in manufacturing and chemical processing—delivering cost savings exceeding $200K, coordinating cross-functional teams, and performing complex process simulations using tools like Aspen HYSYS and ProMax. In parallel, I've developed and deployed supervised learning models for financial forecasting, healthcare prediction, and data analysis, using Python (Pandas, Scikit-learn, XGBoost), SQL, and data visualization tools.

Areas of particular strength include:

- **Expertise in detailed process design, simulations, and scope development**
- **Outstanding performance record marked by assignments requiring advanced skill levels**
- **Success in fast-paced technical environments with minimal supervision**
- **Strong written and verbal communication with multinational teams**
- **Flexible in adjusting to project requirements, working with overseas clients virtually**
- **Deep commitment to learning, innovation, and technical excellence**

I am now seeking an opportunity to apply my data science capabilities in a dynamic organization where I can contribute to impactful analytics initiatives. I would welcome the chance to further discuss how my experience and goals align with your team's needs.

Thank you for your time and consideration. I look forward to connecting.

Respectfully,

Kéli Duggar