Jason T. Cole

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Professional Summary

Data Scientist and Process Engineering Consultant with 20+ years of experience bridging manufacturing, data science, and software engineering. Operates at a Senior Data Scientist level within Corporate IT, leading cross-functional analytics projects and mentoring technical teams internationally. Recognized for driving measurable process improvements through statistical modeling, machine learning, and automation. Patent holder with global experience in process optimization, defect reduction, and applied AI/ML in manufacturing. Skilled communicator and trainer, advancing statistical and data science culture across Saint-Gobain and CertainTeed. Focused on applying Generative AI, advanced analytics, and statistical methods to drive scalable innovation in manufacturing and enterprise systems.

Core Competencies

- Data Science & AI/ML: Regression, Forecasting, NLP, Generative AI, EDA
- Programming & Platforms: Python (OOP, APIs, ML frameworks), SQL, Azure ML, Snowflake/Snowpark, MATLAB
- Statistics & Quality: DOE, Gage R&R, SPC, Lean Six Sigma Master Black Belt
- Manufacturing & Engineering: Process Engineering, Metrology, Digitalization, Industrial Analytics
- Leadership & Training: International team leadership, Mentorship, Saint-Gobain University D&A trainer, SAS Statistical Thinking for Industrial Problem Solving (STIPS) program outline and exam creator

Professional Experience

Data Scientist (Corporate IT, CertainTeed – senior-level scope)

CertainTeed / Saint-Gobain – Corporate IT & Data Analytics | 2022 – 2025

- Developed enterprise APIs and apps (EDA DataSet API, EDA Explorer App), adopted across plants to cut engineering analysis time from days to hours.
- Designed and deployed NLP strategy for Voice of the Customer projects using Huggingface Transformers.
- Advanced Generative AI initiatives, deploying HR and Finance chatbot RAG systems that reduced employee inquiry response times and improved self-service adoption.
- Delivered exploratory data analysis (EDA) at Palatka and Kansas City plants, identifying efficiency improvements that reduced drying cycle time and increased net coverage consistency.

- Led training for SGU DnA Academy and STIPS programs, mentoring engineers and junior data scientists internationally.
- Partnered with IT and data engineering teams to deploy scalable analytics workflows on Azure ML, AILabs MLOps, and Snowflake.

Data Science Competency Lead / Site Statistician (Competency Research Labs – senior-level scope)
Saint-Gobain Research North America | 2017 – 2022

- Served as site statistics expert, consulting across divisions on DOE, Gage R&R, and SPC, while holding weekly open consultation sessions.
- Led a North America–based team of three data scientists delivering international projects that streamlined quality testing and automated analysis, saving hundreds of engineering hours annually.
- Pioneered ML applications, including ultrasound-based wheel classification and Shaped Grain forming, accelerating defect detection and enabling new product introduction worth multi-million revenue potential.
- Automated imaging, data processing, and normalization for life sciences cell culture monitoring, transforming a failing CNN project into a successful proof-of-concept by fixing critical input data quality issues.
- Designed and delivered international DoE training program Tape Solutions.

Senior Research Engineer / Project Leader (SOFC, LG, GaN – senior-level scope)
Saint-Gobain Research North America | 2012 – 2017

- Facilitated technology transition of SOFC substrates to manufacturing, delivering qualified pilot volumes for Bloom Energy.
- Managed joint development of gel-cast ceramic parts for LG Fuel Cell Systems, serving as primary customer interface and project lead.
- **GaN Wafer Project** – Eliminated a polishing step, resulting in patent (EP3231006B1) and significant cost savings. Coordinated with LUMILOG (France) and transferred processes from Fort Devens to Northboro and France, qualifying samples on Koyo grinders. Modeled operations with Value Stream Mapping (VSM) and automated machine setup/data processing to reduce operator error.

Quality Engineer & Six Sigma Change Agent (senior-level scope)
Schott North America – Southbridge, MA | 2007 – 2012

- Acted as Six Sigma Master Black Belt, training Green Belts and mentoring engineers in defect reduction and process optimization.
- Led DMAIC projects that eliminated >60% defect crises and reduced nuisance material defects from 5% → 1%.
- Built C#/.NET web applications for defect trend analysis, saving 16+ engineering/admin hours per week.

- Designed and deployed automated measurement systems with ±3 micron repeatability, unlocking new product contracts.
- Traveled globally to support defense contractor customers, negotiating specifications and compliance.

Process Engineer & Research Engineer (Ceramics, SOFC – early career)
Saint-Gobain Industrial Ceramics & Plastics – Northboro, MA | 2003 – 2007

- Supported process engineering for cast ceramics, including forming, firing, and material qualification.
- Developed custom databases and C#/.NET applications for process and defect tracking.
- Transferred SOFC technology from Germany to the U.S. R&D Center; installed new processes and established process controls.
- Solely responsible for cathode development and processing for SOFC rapid development team.
- Compiled competitor patent landscapes for SOFC technology.

Development Engineer (LCD Glass Substrates)
Corning Inc. – Harrodsburg, KY | 2000 – 2003

- Led experimental design and defect root-cause analysis in glass melting processes, improving yields by >10% in one year.
- Provided global troubleshooting support to plants in Japan and Korea.

Production Supervisor (Float Glass Manufacturing)
AFG Industries – Cinnaminson, NJ | 1998 – 2000

- Managed 30+ technicians in daily float glass operations.
- Implemented performance programs that improved shift output and yield.

Education
Professional M.S. in Industrial Mathematics – Worcester Polytechnic Institute (coursework completed, final project remaining; applied equivalent expertise extensively in professional roles)
B.S. in Ceramic Engineering – Alfred University
Certified Lean Six Sigma Master Black Belt – Villanova University (2007)

Patents, Awards & Affiliations
Patent in GaN processing technology (EP3231006B1: Method for processing off-angle GaN, Saint-Gobain Crystals)
Saint-Gobain Life Sciences, Fluid Systems, R&D Excellence Award for Speed and Quality 2017
Former Board Member, JMP Boston Users Group