

Charles Sizer

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Summary

Mathematician. Engineer. Analyst. Manager.

Objective: Use my start up business experience to obtain a challenging position where I will use my modeling, creative problem-solving, and analytical skills to drive positive business outcomes. Eager to put skill set to work for local Sheboygan employer.

I am a mathematician. I applied my skills to food-industry research and development, operations, and management where, at a succession of bold start-ups, I honed my business understanding. For nearly fifteen years, I was the go-to when complicated problems needed sophisticated spreadsheets to make them comprehensible. I worked with senior leaders to capture business data and inform company strategies and decisions.

Experience

Boombox Beverage LLC

SKOKIE, IL

Director of Food Safety and Quality

July 2020 - Present

Selectively hired during start-up to establish a food safety program in compliance with low-acid foods regulation, achieve Safe Quality Food (SQF) certification, and develop new capabilities to extend the business.

Accomplishments

- Major contributor to company strategies and decision-making; drove insights into food safety problems impacting decisions and business performance
 - Created business policies and the tools to implement them (pillar of organization), assuring regulatory compliance and business continuity
 - Designed and proposed dashboards to tell a story through data to keep leadership informed
 - Learned/applied JavaScript v8 to automate business workflows in google docs
 - Generated/analyzed production reports, identified areas of improvement, and produced actionable reports (issued Corrective Action Requests) daily, keeping company in compliance with regulatory procedures
 - Driving force behind SQF level 1 certification effort
- Designed and implemented Food Safety Program for a startup low acid canned food facility
 - Developed and implemented Food Safety Plan (HARPC) for all products.
 - Hired, trained and, and managed highly regarded Quality Team
- Launched three new products for a national brand, managing and prioritizing concurrent projects, while responding to changing business needs
 - Developed new programs and procedures in a highly ambiguous environment
 - Gathered/analyzed statistical data on machine performance to define customer specification

KD Automation

JACKSON, WI

Systems Integration Manager

July 2019-Feb 2020

Retained to fill gap in cross-disciplinary team to design, develop, creative problem solve, and program a progressive assembly line.

Accomplishments

- Ventured into a different work environment under new management to bring change and apply programming skills
- Implemented a systematic method for programming with anticipation of future needs/developments
- Learned/applied Beckhoff coding environment, a new platform, for real-time automation
- Applied skill to create schematics/BOM/panel layout, assist with electrical panel builds, program PLCs, HMIs, robots, camera and other automation devices and to commission machines

Dairyvative Technologies

REEDSBURG & SHEBOYGAN, WI

Director of Technology

2013 - Oct 2018

Sr Manager responsible for commercialization of a novel dairy product at a tech start-up in a highly parallel and self-motivating setting. Managed product development, processing equipment, integration, controls systems, regulatory compliance, and intellectual property. Designed, built, programmed, and managed the first all-digital dairy processing plant in Wisconsin.

Accomplishments

- Developed new technology for milk preservation with a model-based approach

- Designed and built commercial-scale prototype based on theory; then reduced theory to practice
- Iteratively improved efficiency, reliability, quality, and safety by leveraging use of historical process data (especially loss-of-control postmortems) which provided insight into problems
- Investigated complex viscosity phenomena of the product by designing multivariate experiment and using scientific computing tools to analyze the data.
- Compiled complex results into spreadsheets and graphs that made business decisions intuitive.
- Commercialized standards compliant milk preservation process
 - Led a team of seven through design and build of state-of-the-art food-grade production facility
 - Designed custom batching, heat treating, and packaging solution for the process
- Initiated and drove plant efficiencies on proof-of-concept processing lines with automated production systems integrated with upper levels of business logic
 - Developed and deployed an industry leading SCADA system which reduced labor requirements by 75%
 - Gathered and analyzed process data from across the process system to provide insights into complex product interactions with equipment and optimize production
 - Eliminated paper records, reduced compliance burden, created real-time dashboards and quick read reports allowing equipment operators and management to quickly identifying problems and minimized downtime
 - Developed mechanisms for compliance with digital record keeping regulations (21CFR11)
- Used quantitative analysis to inform company strategies and decision-making
 - Developed interactive spreadsheet to help production, sales and management with complicated concentration and volume conversions. Built interactive Production Calculator to handle all probable products, calculate production requirements, and provide actionable business feedback on cost and feasibility
 - Dedication to correct mathematical modeling and the qualitative and quantitative analysis of failed runs delivered the appropriate equipment and process design.

Cambrooke Foods (now a division of Ajinomoto)

AYER, MA

Product Development Specialist

2012-2015

Designed, assembled and commissioned hot-fill and aseptic beverage processing lines for a medical foods company.

Accomplishments

- Member of leadership team managing \$5MM facility build-out to produce enteric nutrition products.
- Employed data analysis to inform company decisions
 - Generated nutrition reports to formulate and refine medical food products to meet exacting guidelines for enteric nutrition
 - Used mathematical analysis and modeling to design process to gently sterilize protein and maximize shelf-life
 - Forecast sales to plan production and maximize returns on warehouse space

Pilot Aseptic

St. Charles, IL

Technician

June 2010 - 2012

Operated and maintained test-scale beverage processing equipment and utilities. Researched and conducted processing trials on a wide variety of products.

- Analyzed magnetic moment data to infer heat penetration into particles and created numerical heat-penetration model used by Pepsi Co. through present day
- Extensive on-the-fly trouble shooting of Alfa Laval VTIS & FLEX systems

Education

Illinois Institute of Technology

CHICAGO, IL

Applied Mathematics

2004 - 2007

Focused on discrete methods

Skills & Certifications

Technical specialties: Networking. Python (NumPy, SciPy and Pandas), *Ignition!*. Familiar with SQL, ZPL, Git, L^AT_EX, Modbus and Ethernet/IP. Advanced Excel skills. Technologies used: Modbus RTU, 4-20mA loops, PLC ladder logic, Modbus TCP/RTU, Ethernet/IP, ZPL, Jython scripting, SQL, Java, Python (Pandas, Matplotlib, and SciPy), CentOS, and BSD.

Certifications: PCQI, HACCP, BPCS

Patents

Sizer, C.E. and Sizer, C.E. IV. Method and Apparatus for sterilizing containers. US Patent 7,481,974 issued 27 January 2009.

Sizer, C.E. and Sizer, C.E. IV. Method and Apparatus for heating and dispensing sterile product. US Patent 7,595,470 issued 29 September 2009.

Sizer, C.E. and Sizer, C.E. U.S. Patent Application on Process for Making a Beverage Concentrate with a Low Concentration of Nucleation Sites.

Interests

Non-exhaustive and in alphabetical order: cooking, computer security, hiking, kayaking, machine learning, rocket science, space exploration, sustainability