

# LAWRENCE (ANDY) STRICKLAND

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Navy veteran with background in academic research (collaborative and solo) as well as consistent career progression in highly technical, manufacturing roles. I take all of these experiences and come up with innovative solutions to challenging, real-world problems.

## EXPERIENCE

**JUNE 2022 – PRESENT**

### **BOOTCAMP STUDENT**

Completed Data Scientist Certification: Over 30 hours of video instruction and coursework covering the following topics: Statistics, advanced mathematics, Python and data visualization (NumPy, pandas, matplotlib, Seaborn), R, Machine Learning (sklearn), NLP, Deep Learning (TensorFlow), Tableau, Jupyter, Anaconda

Currently enrolled in Full Stack Bootcamp (Udemy, certification pending): Over 65 hours of video instruction and coursework covering the following topics: Web development, HTML, CSS, Bootstrap, JS, jQuery, git, API, Rest, Node.js, Express, databases, React, web design, blockchain and NFTs

**FEBRUARY 2017 – MAY 2022**

### **TECHNICAL INNOVATION MANAGER, SHAW INDUSTRIES**

- Scouted new, emerging technology as it applied to commercial and residential flooring, walls and other surfaces
- Developed new processes and products, including business case, insights, forecasting, costing and market share; regularly pitched proposals to senior leadership
- Developed insights for future market from NPS and third-party sites (e.g., social media)
- Attended trade conferences and maintained technical, working relationships with suppliers, customers and collaborators
- Prototyped UI acoustic mobile app (Android) and led development of patent-pending mobile tactile technology (Apple); experienced in patent space, regularly worked with internal and external legal counsel
- Developed and led company-wide adoption of emerging digital print technology and smart technology for flooring platforms
- Mentored junior process engineer in Innovation Group

**JULY 2014 – FEBRUARY 2017**

### **SENIOR ENGINEER, MOHAWK INDUSTRIES**

- Primarily responsible for oversight of trials and extrusion lines at two plants
- Worked with vendors and internal customers to develop new products and improve existing products
- Provided leadership to a team of senior process technicians and lab personnel in yarn development, set priority for group project completion

- Employed data science to investigate industry topics, including supply chain, preventative maintenance, machine performance, quality specifications; obtained both Six Sigma Green and Black Belts
- Incorporated R, Python and machine learning tools, such as linear and non-linear modelling of complex systems, into daily operations functions
- Developed Proof-of-Concept implementation of large-scale data analysis at Summerville extrusion plant to predict downstream metrics
- Applied statistical tools (e.g., ANOVA, correlation, t-test) to understand the relationship between production variables and quality; investigated large, disparate data sets based in AS400, Excel, Access, and other production locations, including unstructured data (e.g., supervisor reports, audits); experienced user of Pivot/PowerPivot tables

**OCTOBER 2011 – JULY 2014**

#### **PROCESS ENGINEER, CELGARD**

- Managed the day-to-day operations of blown film extrusion, responsible for all trials covering polymer extrusion
- Provided direction and leadership to two engineering technicians
- Expert at trend and root cause analysis; employed SQL, Excel, pivot tables, Access and shell scripting languages
- Recognized a need for new and additional quality and production applications and developed from scratch new GUIs (.NET) which were utilized by the engineers to ensure maximum quality of products
- Developed SQL code to query the optical inspection database to safeguard against shipping low quality products.

**SEPTEMBER 2009 – OCTOBER 2011**

#### **RESEARCH FACULTY, VANDERBILT UNIVERSITY**

Employed traditional molecular dynamics to simulate simple lipid systems; investigated oligomers and polymers confined in pores using discontinuous molecular dynamics simulations; directed the research of undergraduate students; attended and presented at technical conferences

#### **UNITED STATES NAVY**

Fire Controlman (E-5) and OCS, Arleigh Burke class destroyer, responsible for day-to-day operation of onboard computer weapons system and subsystems; educational training in digital systems, computer programs and electronics.

## **EDUCATION**

#### **PHD + MASTERS (CHEMICAL ENGINEERING), NORTH CAROLINA STATE UNIVERSITY**

Peer-reviewed publications and conference presentations on computational simulation of polymeric systems; coursework in Statistical Thermodynamics, Kinetics, Transfer, Mathematical Modeling, Separations and others.

#### **BS (CHEMICAL ENGINEERING), UNIVERSITY OF SOUTH CAROLINA**

## SKILLS

- Programmer (incl. R, SQL, Python, JavaScript, Dart, VBA, FORTRAN)
- Statistical simulations and modeling
- Graph theory algorithms (BFS, DFS, Dijkstra)
- Web development (HTML, CSS, JSON, APIs)
- Data visualization (Tableau)
- Technical researcher and communicator
- Blue ocean, design thinking practitioner
- Experienced in patent space and technical publications
- IDEs: IntelliJ, Eclipse, IDLE, Atom, Jupyter
- German speaker (intermediate)