

LAWRENCE (ANDY) STRICKLAND

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Innovative, technical researcher and engineer looking to use my problem-solving skills in programming and software development. Qualifications: Programming, Front End tech, APIs, databases, data science .

PROGRAMMING AND SOFTWARE SKILLS

- Lifelong programmer (incl. R, SQL, Python, JavaScript, Dart, VBA, FORTRAN, C++, C#)
- Web development (HTML, CSS, JSON, APIs)
- Statistical simulations and modeling
- IDEs: IntelliJ, Eclipse, IDLE, Atom, Jupyter
- Data visualization (Tableau, Power BI)
- Graph theory algorithms and Object-Oriented programming

SELECTED PERSONAL PROJECTS AND ACCOMPLISHMENTS

- Top 1% ranking at Codingame, top 0.4% US (multiple languages)
- Python programming certification (CG)
- Developed code to download personal API data from Duolingo
- Developed code to draw ASCII art from images
- Multilinear analysis of NBA statistics analysis of NBA statistics (Jupyter)
- Folium-powered map of traveled locations

EXPERIENCE

JUNE 2022 – PRESENT

STUDENT, PERSONAL DEVELOPMENT

- Currently enrolled in Full Stack course (certification pending), topics include: Web design, HTML, CSS, Bootstrap, JavaScript, jQuery, version control (Git), API, SQL and NoSQL databases.
- Certified Data Scientist, topics include: Python, data visualization, R, Machine Learning, NLP, Deep Learning (TensorFlow), Tableau, Jupyter, Anaconda (certificate: shorturl.at/cjn59)

FEBRUARY 2017 – MAY 2022

TECHNICAL INNOVATION MANAGER, SHAW INDUSTRIES

- Created and maintained new macros for data storage and analysis of processes.
- Sole creator of Android app (Studio) for experiencing flooring acoustics. Lead Shaw team which collaborated with UGA on haptics app (iOS), authored patent (pending).
- Employed Arduino programming (C++) to develop prototypes, import data (including APIs) and incorporate other smart technology into new flooring products.
- Extracted data from external sources (including FRED and social media) to develop reports (Power BI) and presentations to drive Shaw business strategy.
- Collaborated with plants, vendors and internal customers on new processes/products.
- Scouted new, emerging technology as it applied to commercial and residential business goals and needs. Prototyped new products and presented to director and VP levels.

JULY 2014 – FEBRUARY 2017

SENIOR ENGINEER, MOHAWK INDUSTRIES

- Extracted continuous, process data from SCADA databases, cleaned and prepared data for analyzing, modeling and reporting for director and VP level management.
- Analyzed process relationships using R programming language and Python.
- Developed Proof-of-Concept implementation of big data analysis into daily functions at Summerville extrusion plant, incorporating machine learning and modeling, to investigate supply chain, preventative maintenance, performance, reports, quality specifications.
- Improved prediction of machine failure, parts change-over, poor quality product, recognition of atmospheric variables, resulting in new process controls and alarm settings.
- Certified Six Sigma Green and Black Belt, mastered DMAIC process to measure, analyze and improve efficiency and output leading to \$1+ million annual savings.
- Responsible for daily oversight of twelve production lines, extrusion development and trials. Managed three senior process technicians and lab personnel. Worked with plant departments to understand data needs and design individualized solutions.

OCTOBER 2011 – JULY 2014

PROCESS ENGINEER III, CELGARD

- Attended daily team huddle to discuss plant performance, upcoming trials and maintenance. Prepared daily reports for upper-level management.
- Versed in relational databases, SQL and importing, cleaning and analyzing data
- Recognized a need for new, additional quality and production applications. Developed new GUIs from scratch (.NET), maintained and updated code with new services, incorporated HTML and CSS elements
- Collaborated with other departments on documentations, tests, trials and reporting
- Managed two senior technicians and day-to-day operations of six blown film extruders

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 (FORTRAN).

BS (CHEMICAL ENGINEERING), UNIVERSITY OF SOUTH CAROLINA

OTHER SKILLS

- Technical researcher and communicator
- Experienced in patent space and technical publications
- Blue ocean, design thinking practitioner
- German speaker (intermediate)