

RANDY WEAVER

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Data Analyst with a mechanical engineering background in product development and manufacturing. Earned a certificate from Georgia Tech's Data Science and Analytics Program. Seeking to provide data-driven analyses and effective visualizations to develop operational recommendations and drive impact. Skilled at communicating complex findings in an actionable way, collaborating in a cross-functional environment, and strategic thinking.

TECHNICAL SKILLS

Data Analytics and Programming: extract transform and load (ETL) process, data mining, data cleaning, APIs, relational database setup and use, synthesizing and combining diverse data sets, statistical techniques including linear regression, data visualization (charts, maps, and dashboards), supervised and unsupervised machine learning solutions (ML), deep learning using neural networks, application and web development, version control and workflow, debugging, and OOP.

Proficiencies: Python, Java, git, GitHub, Jupyter Notebook, SQL (PostgreSQL), JavaScript, Tableau, HTML, CSS, MS Excel, MS Word, Heroku, Flask, and leaflet. Python libraries: Pandas, requests, scipy, sqlalchemy, matplotlib, and tensorflow.

SELECTED PROJECTS

Heart Attack Prediction Webpage | <https://github.com/randallwvr90/Heart-Attack-Risk-Factor-Tool>

A webpage that takes commonplace diagnostic data and returns a score that represents the patient's heart attack risk. Powered by a neural network model.

- **Role:** Data Scientist, Web Developer
- **Tools:** Heroku web deployment, Flask, CSS, Jupyter Notebook, Python, Python libraries: sklearn, tensorflow, pickle

Earthquake Map | <https://github.com/randallwvr90/quake-map>

A webpage that displays historical earthquake data scraped from the USGS Earthquake Hazards Program, presented with a map created using Leaflet, HTML, and JavaScript. World map information was gathered from OpenStreetMap, OpenTopoMap, and Stamen.

- **Role:** Data Analyst, Web Developer
- **Tools:** HTML, CSS, JavaScript, JSON

Covid 19 Analysis of Deaths | <https://github.com/randallwvr90/Covid-Deaths-Analysis>

Geographical analysis of COVID-19 deaths. Data sources were CDC COVID death records, U.S. Census Records, and Google Maps API. Evaluation includes a heatmap and linear regression of geographical data.

- **Role:** ETL, seasonal trend analysis, analysis of death and infection peaks
- **Tools:** Jupyter Notebook, Python libraries: pandas, requests, matplotlib, numpy, scipy

RELEVANT PROFESSIONAL EXPERIENCE

Flock Safety, Atlanta, GA

2020 – 2021

Manufacturing Engineer

Oversaw the manufacturing of the MK 3 license plate reader camera, including focusing the camera module, installing the operating system, circuit board subassembly, final assembly, unit testing, and troubleshooting issues. Analyzed output and quality data for process improvement, reducing operations cost and meet key success metrics.

- Installed and monitored new systems at the contract manufacturer (CM), including new processes, equipment, test stands, and Python test scripts.
- Created GitHub repository for test script version control.

- Traveled to the CM when necessary for troubleshooting manufacturing issues.
- Increased uptime by updating and debugging Python test software and adjusting the process.
- Increased throughput from an average of about 40 units per day to over 100 per day.
- Established and managed our 500-square-foot lab space.

Coca-Cola (Contract through Insight Global), Atlanta, GA

2018 – 2020

Fluidics Engineer

Developed the fluidics subsystem of the Coca-Cola Freestyle Machine. Created solutions to issues with the current product, investigated cause of reliability and quality issues, and designed and built test stands for these investigations. Collected and analyzed lab and field-test data to iterate the design and improve product quality.

- Created image subtraction test to evaluate ingredient mixing, eliminating lab tests and reducing turnaround.
- Designed and built test stand to evaluate the performance of the Machine's liquid sweetener cold plate.
- Developed procedure to evaluate the sanitation process for field replacement flow control valves. Reduced the amount of sanitizer needed from approximately 7 L to 1 L per module.
- Ideated and tested new methods to mix micro-ingredients in the Freestyle dispenser.
- Specified and evaluated a micro-ingredient agitation (mixing) test stand with an outside supplier.
- Evaluated field-replaced control valve components. Documented with micrograph for supplier review.

Cooper Lighting (Eaton Corporation), Peachtree City, GA

2017 - 2018

Senior NPD Engineer - Outdoor Group

Developed outdoor light fixtures for roadway and architectural applications. Owned the product from ideation through design and product launch. Collaborated with multidisciplinary teams to ensure exceptional design, on-time launch, and compliance with product requirements.

Design:

- Projects: Supported development of three new product lines. Axcen wall pack fixture launched 2018.
- Tested assembly line fixtures and processes during the product design phase.
- Applied design process, considering variables such as component manufacturability, design for assembly, product safety, and cost. Utilized DFMEA to mitigate risks in the design.
- Received and evaluated sample product parts. Worked with vendors to make tooling, process changes.

Testing:

- Performed evaluation tests on prototype fixtures in order to validate new designs.
- Created project test plan for UL, IP, DLC compliance. Coordinated with compliance, test lab teams.
- Assembled test articles for vibration, thermal, IP, and extended life testing.

Square-D (Schneider Electric), Columbia, SC

2014 - 2016

Mechanical Design Engineer

Order-for-order design engineer for low-voltage draw out (LVDO) switchgear. Designed custom switchgear sections and ensured standard sections fit together and meet customer needs.

US EPA Kerr Research Lab, Ada, OK

Summer 2012

Intern

Managed project to better understand city water supply and to produce a tool that could be used for city planning. Using computerized numerical techniques, developed tools that could be used for city planning of water distribution networks.

EDUCATION / AWARDS

Georgia Tech Professional Education, six-month Data Science and Analytics Program, Atlanta, GA
Completed 2022

Georgia Institute of Technology, Atlanta, GA

B.S. Mechanical Engineering - 2013

Eagle Scout

2008