

ALEX GARDINER

SALEM, MA

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WWW.ALEX-GARDINER.COM · WWW.GITHUB.COM/AUGARDINER

PROFESSIONAL EXPERIENCE

Markforged

Billerica, MA

Data Systems Engineer

March 2022-Present

- Build web applications used in manufacturing to improve operator effectiveness and product traceability
 - Use Inductive Automation's Ignition platform to create polished UIs
 - Maintain MySQL database to store manufacturing data
- Contribute to firmware running on manufacturing equipment to enable real-time quality and inventory control
 - Embedded Python program that measures and analyzes 3D printer filament and fiber diameter in real time
 - Write unit tests for firmware
- Lead digital transformation efforts to improve factory intelligence
 - Use OPC to communicate with factory equipment and automate process parameter logging
 - Build prototype IIoT infrastructure centered around MQTT
 - Introduce iPads to production floor for mobile data integration
- Maintain IT/OT infrastructure and build DevOps tooling to boost system reliability and developer efficiency
 - Manage series of Linux servers and containers that host/run all facility services
 - Write a python pre-commit hook to lint JSON files and remove unnecessary changes
 - Write bash script to keeping development database in sync with production
 - Use Docker to create a development environment
- Build data pipelines to enable analysis and advanced decision making
 - Develop a system of batch processing jobs to clean, analyze, and visualize manufacturing data

Technical Solutions Engineer II

February 2019-March 2022

- Provide end-user support for metal and composite additive manufacturing systems to improve customer experience
- Analyze support ticket and device data in order to identify existing issue trends and better anticipate ticket volume
- Developed data pipeline for warranty replacements to better understand component failure rates and lifetimes
- Deployed app to AWS that parses device logs and displays pertinent data

Folsom Custom Skis

Denver, CO

Production Engineer

October 2016-October 2018

- Develop custom ski geometry and material construction
- Advance tooling and manufacturing techniques to increase and streamline ski production
- Fabricate custom skis, using automated and manual processes, to produce renowned and award winning products
- Build and maintain digitally integrated manufacturing database to increase and track production pace
- Work closely with clients through personal fit process of custom skis to enhance overall customer experience
- Develop [new website](#) to increase online presence and sales

Charles Riverboat Company

Cambridge, MA

Ship Captain

June 2010-Present (P/T)

- Hold USCG Issued 100 Ton Master License and TSA Issued TWIC Security Clearance
- Responsible for safety of all crew members and passengers aboard vessel

EDUCATION

University of Denver – Bachelor of Science, Mechanical Engineering

2016

Holderness School – High School Diploma

2011

SKILLS

- **Software:** Object-oriented programming, Scripting, Rest APIs, UI/Frontend Design, Common DevOps Practices
 - Python, Flask, Javascript, React, HTML/CSS, Linux, Bash, Docker, AWS
 - [Prints Albert](#): A virtual 3D Printer that prints virtual parts from a user-managed library, virtually
- **Data:** Collection, Organization, Preparation, Exploration/Visualization, Analysis
 - SQL, Batch Processing, Pandas, Matplotlib, Scikit Learn
 - [Hot Stuff](#): An app visualizing popular music trends
- **Hardware:** Additive Manufacturing, CAD, Machining, Tooling
- **Nontechnical:** Project Management, Technical Writing, Customer Service, Presentation, Graphic Design