ALEX GARDINER

SALEM, MA

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PROFESSIONAL EXPERIENCE

Markforged   **Waltham, 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 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 Industrual IoT 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 keep development database current 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
- Develop 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

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EDUCATION

University of Denver – *BS, 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 Processsing, 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