Matthew Fredrick

Software Developer

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OBJECTIVE

I am looking to leverage the skills and experience from my engineering career to tackle new challenges in software development. I would like to continue to build on a solid knowledge base in a field that pushes me to learn and innovate. I'm particularly interested in expanding my knowledge of object-oriented programming and digital signal processing through developing innovative software applications.

SKILLS

| C++ | Python | OOP | Git | MATLAB | DSP | JUCE | GUI |

EDUCATION

BS Mechanical Engineering (GPA 3.58) Worcester Polytechnic Institute Grad: 2013

Relevant Coursework: MATLAB/Octave algorithm development and programming for signal processing and design calculations, Java, engineering testing using signal analysis from sensors

Specialist Certificate Creating Audio Plugins with JUCE and C++ Kadenze Awarded: 2019

Description: Project-based course of study in advanced audio plugin development. I created a Chorus/Delay effect plugin which I host and maintain as a GitHub repository.

EXPERIENCE

Project Manager Dave A. Mangano Fine Carpentry 2018-2019

Fostered excellent relationships with clients, design professionals, contractors, and colleagues. Provided high-quality solutions and material selections within a tight budget and deadline.

Inventor Drafting and Automation Specialist Ipswich Bay Glass 2018 (6 mo. contract)

Pioneered programs and developed algorithms to reduce time to production by automating drafting work flow in Autodesk Inventor. Worked with a team to migrate drafting from AutoCAD to 3D CAD technology ahead of competitors. Implemented custom solutions using Inventor API, iLogic, C++, VBA, and Excel.

Design Engineer SARC Global Inc. 2017-2018

Managed R&D projects from conception to production process. Used data analysis, cost-tracking, and documentation to maximize profitability and effectiveness of designs. Produced 3D models and prototypes using Solidworks and 3D printing. Created the documentation for products and processes under development and maintained records of revisions and changes.

Chief Marine Engineer   World Ocean School   2016-2017

Oversaw the engineering systems aboard Schooner Roseway on an international educational voyage. In this role, I documented the shipboard mechanical and electrical systems, planned for expected modes of failure and maintenance needs, and sourced materials and information to prepare for operations where self-sufficiency was required and down-time of critical systems was unacceptable.

Solutions and Documentation Engineer   Vacuum Technologies Inc. (VTI)   2014-2015

Led technical operations for the organization's North American outpost. Worked with a team on PLC machine control GUI development. Debugged and improved control algorithms. Wrote and edited technical documentation including the North American product operation manual for a product line, engineering and troubleshooting guide to streamline service calls, and the North American web page for an international equipment manufacturer. Provided remote and on-site support and troubleshooting and technician training.

Lead Carpenter   Rocky Neck Associates   2010-2016

Progressed from an apprenticeship to lead a crew of tradespeople in high-end construction and renovation projects. Upheld a high level of quality and maintained superb relationships with clients and contractors.