LinkedIn

Website

Erik Giordani

Email: erik.c.giordani@gmail.com | erik@xactmetal.com
Linkedin: linkedin.com/in/erik-giordani ▪ Website: erikgiordanic.wixsite.com/home

WORK EXPERIENCE

Xact Metal, State College, PA, USA
Applications Engineer - LPBF Metal Additive Manufacturing *Mar 2023 – Present*

- Researching & Developing printing parameters, collecting and analysing test data from DOEs
- Modeling, slicing, managing, and post-processing printed parts for a variety of industries and applications
- Designing and testing new products and add-ons for existing printers, and writing associated documentation
- Supporting sales team and customers around the world, generating reports, simulations, and case studies

Rice University, Houston, TX, USA
Research Assistant – Department of Statistics *May 2022 – Nov 2022*

- Researched and employed Machine Learning techniques to classify large Astronomical datasets
- Developed Matlab algorithms to analyze, process, store, manage and display high-dimensional data and images

Federal University of Rio Grande do Sul (UFRGS), Porto Alegre, RS, Brazil *Feb 2019 – Jul 2021*
Student Researcher / Teaching Assistant – Computational Methods in Physics

- Designed quantum mechanical interferometers based on the analysis of simulations developed in Python
- Reviewed and translated code from C to Python, and explained numerical simulations to 4 undergraduate classes

Auto Arte (Family Business), Porto Alegre, RS, Brazil *2018, 2020*
Social Media Marketing / Management Intern and Automotive Repair Trainee

EDUCATION

***RICE UNIVERSITY**, Houston, TX* *Aug 2021 - Dec 2022*
Master's Degree in Space Studies - Aerospace Engineering [Awarded Merit-Based Scholarship] GPA: 3.85

- ***Key Coursework / Projects:***
  - **Computer Aided Design (CAD)** - Used SOLIDWORKS to design and analyze aerodynamics of propellers
  - **Neural Image Synthesis** – Coded and utilized GANs, NeRFs and other image synthesis algorithms
  - **Orbital Dynamics** – Created Matlab algorithms to simulate the trajectory of rockets
  - **Algorithmic Robotics –** Designed algorithms to control robots using C++ and Python

  Other: Multiphysics Modeling, Computational Fluid Dynamics, Product Management for I4.0, Machine Learning

***UFRGS** (Brazil) / **LUND UNIVERSITY** (Sweden - Exchange Student)* *Jan 2017 – Aug 2021*
Bachelor of Science in Physics – Focus on Astrophysics, and Computer Science electives

EXTRACURRICULAR ACTIVITIES

***Rice Eclipse Rocketry Team** – Group member* *Jan 2022 - Dec 2022*

- Collaborated with other students on drafting, designing, simulating, prototyping, manufacturing, testing, and analyzing data from different components of the rocket (Launch Rail , Payload, Auto-Recovery Electronics)

Personal Projects

- 3D modeling and printing enthusiast with over 6 years of experience using a wide variety of software and printers

SKILLS - Computer-Aided Design, Research, Mechanical Engineering, 3D Printing (FDM/SLA/LPBF), Programming, Manufacturing, CNC, Laser and Plasma cutting, Soldering, Machine Learning, Product Management, Data Analysis, Data Science, Teamwork, Problem Solving

SOFTWARE - Blender, SOLIDWORKS, NX, Fusion 360, MATLAB, Python / Anaconda, C, C++, LaTeX / Overleaf, Colab, MS Office, Arduino, COLMAP / NeRF, ArcGIS, XFoil, COMSOL, Ansys, Cura, Chitubox, Gcode, Raspberry Pi

SOLIDWORKS CERTIFICATES - Computer-Aided Manufacturing (CAM), Additive Manufacturing, Mechanical Design (sketches, parts, assemblies), Model-Based Definition (MBD, PMI, GD&T), Drawing Tools, and Simulation
LANGUAGE SKILLS - English, Portuguese, Japanese (Studying, N4~N3 level), Spanish (Intermediate)