Kyle R. Graupe, EIT

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EDUCATION

Old Dominion University — M.S. in Modeling and Simulation Engineering, Expected: 2023

Virginia Polytechnic Institute and State University — B.S. in Aerospace and Ocean Engineering, 2019

SKILLS

- Python: Pandas, Matplotlib, Numpy, OpenCV, SkLearn, Keras with Tensorflow, PyTorch, etc.
- MATLAB
- Wolfram Alpha Mathematica
- Finite Element Software: FEMAP with NX Nastran, ShipMo CFD, Maestro FEM
- Microsoft Office: Word, Excel, Powerpoint, Outlook, Teams, etc.

PROFESSIONAL CERTIFICATES

- **IBM AI Engineering Specialization:** Deep Learning with Keras, Tensorflow, and PyTorch, Machine Learning w/ Python, Computer Vision and Image Processing, and AI Capstone Project
- **NCEES Fundamentals of Engineering**

EXPERIENCE

Freelance Software Developer/Engineer — Dec. 2020 to Present
- Built a portfolio of machine learning models using Keras, Tensorflow, PyTorch, and Sci-kit Learn.
  - https://github.com/kylegraupe/MachineLearning
- Completed projects for clients in Python using OOP and other standardized practices.
- Consulted with clients and recommended architectures for machine learning applications.

Marine Engineer at THOR Solutions, LLC. — May 2020 to Present
- Responsible for conducting engineering support for the Coast Guard Fast Response Cutter Program Management Office.
- Currently supporting design efforts using modeling and simulation tools such as finite element analysis (FEA) and computational fluid dynamics (CFD) for US Navy unmanned surface vessel projects.
- Lead efforts to design and modify ship systems and arrangements such as those included in the main and auxiliary engine rooms for Large Unmanned Surface Vessel (LUSV) concept.

Naval Architect Engineer I at Austal USA — July 2019 to Jan. 2020
- Engineer under the Expeditionary Fast Transport (EPF) and Littoral Combat Ship (LCS) programs.
- Lead the design of an Engineering Change Proposal (ECP) regulated by the American Bureau of Shipping to be applied to the EPF program. Used first principles and finite element software for calculations and modeling.

Undergraduate Researcher: CNNs for Ship Wake Detection — Jan. 2018 to May 2018
- Designed randomly generated, physics-based training environments using Python and its libraries on which Convolutional Neural Networks (CNNs) could train for the purpose of detecting a ship wake using synthetic aperture radar (SAR) imaging.

Undergraduate Researcher: Naval Engineering Systems Design — Jan. 2019 to May 2019
- Implemented linear programming and flow-based models to optimize system architecture and size components.
- Investigated the implementation of system networks and logical architecture in ship design.