Christopher Jellen

cdjellen.com

Professional Objective

My goal is to leverage my leadership skills, unique educational background, and data-focused technical experience to enhance understanding, lead teams to solve problems, communicate results effectively, and improve decision making.

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Clearance: SECRET

Languages and Libraries

- Python
- Pandas
- TensorFlow
- MATLAB
- R

Technical Skills

- Computer Aided Design
- Rapid Prototyping
- Machine-learning model development

Awards and Affiliations

- Tau Beta Pi
- Pi Tau Sigma
- ASME
- Trident Scholar
- Congressional Award Gold Medal
- Eagle Scout

Education

United States Naval Academy, Midshipman. Annapolis, MD *2016-2020*

GPA: **4.0** | *Academic Order of Merit*: **1** *Clearance:* **SECRET**

Bachelors of Science, **Honors Applied Mathematics**

Bachelors of Science, **Mechanical Engineering**

Rice University. Houston, TX *2015-2016*

Skills and Experience

Mechanical Engineering Design

- Applied rapid prototyping and computer aided design to develop a semi-autonomous fluid pipe inspection robot.
- Designed and built custom a sensor system for navigation and image capture.

Machine Learning Model Development

- Trained and tuned an image classifier for corrosion classification used on a semi-autonomous inspection robot.
- Investigated non-parametric ensemble decision trees and convolutional neural network models for regression and classification.

Data Analytics

- Developed synchronized time-series data sets using a wide range of data sources.
- Cleaned large data sets with missing values for use in model training and evaluation.

Projects and Research

Trident Research Project: A Machine Learning Model for Optical Turbulence

- Collected field measurements of local scintillation and weather parameters
- Developed an expansive 15 month data set
- Trained and tuned a variety of machine-learning based models in Python, R, and MATLAB leveraging visualization and analysis libraries.

United States Naval Academy Corrosion Robot Team Leader

- Led a team responsible for the design and construction of a semi-autonomous inspection robot, and placed 1st against other undergraduate teams in a national design competition.

Options Volume Stock Market Volatility Model

- Developed and queried an SQL database to visualize dollar volumes of daily options contract writing.
- Predicted future market volatility using a recurrent neural network trained on a time series of options volume for the SPY S&P500 ETF.

Leadership Background

United States Naval Academy 1st Regimental Midshipman Operations Officer

- Led a team of 36 Operations Officers in planning and executing a wide range of events for a regiment of over 2000 Midshipmen.

PROTRAMID Company Commander

- Developed leadership structure and executed a summer training program with United States Navy and Marine Corps officers.