

WILLIAM ZHANG

chiwei.zhang@gmail.com || (617)309-8441

WORK EXPERIENCES

JOHNS HOPKINS APPLIED PHYSICS LAB (ELECTROMAGNETICS GROUP)	LAUREL, MD
DATA SCIENTIST/SOFTWARE ENGINEER	November 2018 – Present

- Developed convolutional neural network (CNN) approaches to identify sonar signals of interest that outperformed baseline algorithm detection by 30% at relevant false alarm rates
- Executed CNN trade study experiments towards radar waveform classification and briefed results to project manager
- Integrated machine learning methods for data prioritization in acoustic localization software to reduce time-to-insight
- Developed target classification algorithm to be deployed on multi-sensor sonobuoy product, in advance of a multimillion-dollar project pitch
- Principal investigator on an internal research effort (\$15k) for researching and developing machine learning algorithms for multimodal anomaly detection

JOHNS HOPKINS APPLIED PHYSICS LAB (MARITIME SYSTEMS GROUP)	LAUREL, MD
DATA SCIENTIST/SOFTWARE ENGINEER	February 2018 – November 2018

- Preprocessed and aligned wide area motion image (WAMI) dataset for target tracking algorithm development efforts
- Researched ship traffic pattern of life and presented data visualizations such as geospatial traffic-density heatmaps
- Developed algorithms for time & frequency domain feature extraction on underwater acoustic data to identify paths forward for improving design of data collection platforms

SKILLS

Communication: leadership, composing/presenting technical briefs and writings, proposal writing

MATLAB (10,000+ lines): time series and image processing, algorithm development, data visualization, Deep Learning toolbox

Python (10,000+ lines): Jupyter, TensorFlow/Keras, NumPy, Pandas, Scikit-Learn, Plotly, Bokeh

Other: Git, C (1000+ lines), assembly-level languages

EDUCATION

THE JOHNS HOPKINS UNIVERSITY	BALTIMORE, MD
-------------------------------------	----------------------

- | | |
|--|---------------------------|
| ▪ M.S.E. Applied and Computational Mathematics | Anticipated December 2020 |
| ▪ M.S.E. Electrical Engineering | December 2017 |
| ▪ B.S. Electrical Engineering | May 2017 |
| ▪ Background in machine learning, signal processing, probabilistic and statistical methods | |