JENNIFER SLOBODA

DATA SCIENCE / MACHINE LEARNING / SOFTWARE ENGINEER

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SOFTWARE SKILLS

Python *pandas, scikit-learn, PyTorch, TensorFlow, TFLite, Keras, NLTK, Flask (beginner-level)*

React JS *Typescript, Material-UI*

MATLAB, C++, C, Scala, R

SQL, PostGIS, Elasticsearch, Neo4j, Spark

Adobe XD, Kibana, Tableau

EDUCATION

B.S.E. Computer Engineering
University of Michigan
Ann Arbor, MI / 2010-2014

Advanced DSP & Applications
DSP Design Lab
Computer Vision
Electrical Biophysics
Philosophy of Cognition

Non-degree Courses

Linear Algebra, Machine Learning
Boston University / 2016, 2017

Big Data Analytics
Harvard / 2017

Computational Psycholinguistics
MIT / 2019

Principles of Programming Langs.
CU Boulder / 2020

Selected Projects

Real-time radar heartbeat monitor

Facial emotion recognition

Syntactic generalization of supervised LSTM language models via number prediction tasks

PUBLICATIONS

* jsloboda.github.io/#/publications

WORK EXPERIENCE

6+ years in interdisciplinary applied research; largely health & humanitarian tech.

Broad algorithm development experience spans time series analysis/prediction/classification, object detection, image classification, speech analysis, physiological signal processing, high-level embedded deployment; often deep-learning-based.

Software dev for data preparation, exploratory analysis, scalable experimentation, visualization. Domain expert engagement. Report/briefing creation & presentation.

~1 year web development and design.

MIT Lincoln Laboratory / April 2015 - present / Lexington, MA

Associate Research Staff / 2018 - present

- Sensor network analysis for land surveillance (Elasticsearch, Kibana)
- Front-end web development & UI design of data dashboards for COVID-19 situational awareness and humanitarian aid supply chain logistics
- Application of uncertainty-aware deep learning to medical decision support *
- Research & development of LSTM models, plus supporting software, for wearable-sensor-based human motion prediction for exoskeleton control *
- Research, data wrangling, statistical analysis, & software development to inform US sub-national human trafficking prevalence estimation *
- Adapted neural net architecture search software for hematoma detection in cranial CT scans

Assistant Research Staff / 2015 - 2017

- Design and development of a Python package to process flight data at scale to extract and analyze features predictive of pilot fatigue
- Investigation of vocal biomarkers predictive of cognitive load & fatigue *
- Adaptation and testing of prototype vehicle classification techniques
- SEIR model simulation, algorithm evaluation for biosurveillance applications

Research Intern

INRIA / Summer 2013 / Grenoble, France

Investigated, implemented, and integrated a blood perfusion model into ASL fMRI data analysis software to improve joint signal component estimation *

U of Michigan Medical School / Winter 2013 / Ann Arbor, MI

Developed EEG data visualization and analysis scripts: spectral power, channel coherence, cross-frequency coupling (MATLAB EEGLAB toolbox) *

Scripps Oceanography / Summer 2012 / La Jolla, CA

Oakland University / Summer 2011 / Rochester Hills, MI

Developed computationally efficient sleep stage ID from respiratory signals *