Robert (Bobby) Wagner
http://www.bobby-wagner.com
Email : bobby@bobby-wagner.com
Mobile : 330-858-8123

Research Engineering Experience

Yelp - *Software Engineering Intern* *May 2018. - Aug. 2018*

Distributed Processing: Migrated batch algorithm to Apache Spark, speeding it up to process 3 billion rows in under 30 minutes
Online Machine Learning: Deployed XGBoost model which serves over 300 queries per second on geospatial data

Pandata - *Data Engineering Intern* *Jan. 2018 - May. 2018*

Cloud Data Storage: Led migration of data storage for use with natural language models to Google Cloud Storage
Client Facing: Performed and automated adhoc data analysis to help non-technical clients with data driven decision making

Ray Artificial Intelligence Lab - *Student Research Engineer* *Jul. 2017 - Feb. 2018*

Natural Language Generation: Extended a Natural Language Generation system for use with different grammar formalizations

Kirsch Brain-Machine Interface Lab - *Student Research Engineer* *Aug. 2015 - Jul. 2017*

Brain-Machine Interface: Part of Brain-Gate 2 trial, worked with participants with quadriplegia
Data Visualization: Developed novel methods for visualizing path efficiency for grasps in 2D and 3D spaces

Open Source Projects

OpenMined - *https://github.com/OpenMined* *Aug. 2017 - Present*

Multiparty Computation: Extended PyTorch to support operations on secure data using multiparty computation
Community Engagement: Inaugural member of weekly sync which reports on status of project to members of the community
Code Quality: Automated code quality tools to ease development and code review for an internationally distributed team
Education: Maintain list of relevant technologies at https://github.com/OpenMined/private-ai-resources

R4 - *https://github.com/buckbaskin/r4* *Feb. 2017 - Apr. 2017*

Server Development: Built back end to route incoming requests to S3, Google Cloud and Azure buckets using Django
Functionality Parsing: Implemented JSON parsing to generate functions from boto3 technical descriptions

Walkmate - *https://github.com/buckbaskin/walkmate* *Oct. 2016 - Dec. 2016*

Database Development: Designed object-relational database schema and created appropriate tables using postgresql
Web Design: Created web interface for manipulating the database using python, psycopg2, flask and docker

Education

Case Western Reserve University - *Bachelor of Science in Computer Science* *Aug. 2015 – Jan. 2019*

Grade Point Average: 3.30
Selected Relevant Courses: Machine Learning, Advanced Algorithms, OS and Concurrent Programming, Data Privacy
Teaching Assistant: Algorithms

Selected Publications

A Generic Framework for Privacy Preserving Deep Learning - *NIPS Privacy Preserving Machine Learning Workshop* *2018*
Theo Ryffel, Andrew Trask, Morten Dahl, **Bobby Wagner**, Jason Mancuso, Daniel Rueckert and Jonathan Passerat-Palmbach

Invited Talks

Cleveland Artificial Intelligence Group - *Introduction to OpenMined* *Feb. 15, 2018*

Cleveland Artificial Intelligence Group - *Graph Neural Networks* *Sep. 20, 2018*

Programming Skills

Languages: Python, Java, C, SQL

Technologies: Spark, Docker, Postgresql, NLTK, SpaCY, Pytorch, Git, Linux

Leadership and Extracurriculars

Case Western Reserve Chapter of Delta Chi: Recruitment Chair, Judicial Board Member

Alpha Phi Omega, Theta Upsilon Chapter: Webmaster, Sergeant at Arms

CWRU Fighting Gobies, Ultimate Frisbee Team: Developmental Team Member