Richard Sear

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Education

BACHELOR OF SCIENCE | MAY 2021 | THE GEORGE WASHINGTON UNIVERSITY

· Major in Computer Science with Minors in Physics and Mathematics
· University Honors Program | GPA: 3.88
· Student Organizations/Societies: Tau Beta Pi Honor Society, GW ACM, GW Undergraduate Review, GW Robotics

Work Experience

UNDERGRADUATE RESEARCH ASSISTANT | GWU DYNAMIC ONLINE NETWORKS LAB　　　　　**SEPTEMBER 2018 – PRESENT**

· Working with Dr. Neil Johnson's research team, studying many-body physics of user behavior in online anti-vax groups
· Performing Sequential Latent Dirichlet Allocation unsupervised topic modeling on text data
· Developed open-source Python package for data bookkeeping and ML experiments: https://github.com/gwdonlab/ogm
· Published work in IEEE Access: https://doi.org/10.1109/ACCESS.2020.2993967

INDEPENDENT CONTRACTOR | CLUSTRX LLC　　　　　**MAY 2020 – AUGUST 2020**

· Contributed to Jigsaw project applying automation to identifying "flavors" and intensity of online hate
· Performed supervised ensemble ML experiments to classify hate "flavors"
· Integrated Google's Perspective models with traditional methods to find effective ways of scoring hate intensity

STUDENT RESEARCHER | JOHNS HOPKINS HLTCOE SCALE PROGRAM　　　　　**MAY 2019 – AUGUST 2019**

· Worked with small research team on topic identification and named entity recognition
· Utilized TensorFlow to analyze effects of reduced- and partially reduced-size training sets on text analysis tasks
· Iteratively fine-tuned Google's BERT model using a series of language processing tasks

CHIEF TECHNOLOGY OFFICER INTERN | BUCHANAN & EDWARDS, INC.　　　　　**MAY 2018 – AUGUST 2018**

· Trained machine learning model to identify primary emotions with ~15% average error rate (Microsoft CNTK for Python)
· Delivered Azure webapp built with Flask to analyze uploaded images and videos

Projects

See more on my website's "Class Projects" page

· AWS/Arduino IoT board game player　　　　　March-April 2020
· Implementation of container manager system in the xv6 operating system　　　　　November-December 2020
· Full-stack webapp: registration/advising system developed on a LAMP AWS server　　　　　April-May 2019

Skills & Abilities

TECHNICAL SKILLS

· Software: Visual Studio Code; Azure; AWS; Git; Arduino; Adobe InDesign, Photoshop, Illustrator; Google Analytics; MS Office
· Proficient in Python, Java, C, PHP, MySQL, HTML, CSS; familiar with R, MATLAB, LaTeX, Bash

LEADERSHIP/TEAMWORK

· Layout Manager, GW Undergraduate Review　　　　　September 2017-Present
· President, GW Robotics　　　　　April 2019-April 2020