

Richard Sear

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Education

BACHELOR OF SCIENCE | MAY 2021 | THE GEORGE WASHINGTON UNIVERSITY

- Majors: Computer Science, Physics
- University Honors Program | GPA: 3.9
- Student Organizations: GW ACM, GW Undergraduate Review, GW Robotics
- Member of the Tau Beta Pi Honor Society

Work Experience

UNDERGRADUATE RESEARCH ASSISTANT | GWU PHYSICS DEPARTMENT

SEPTEMBER 2018 – PRESENT

- Working with Dr. Neil Johnson's research team, studying many-body physics of user behavior in online extremist groups
- Using Python modules (Scikit-learn and Microsoft CNTK) to conduct machine learning experiments on image data
- Presented work at GW Research Days student colloquium (April 2019)

STUDENT RESEARCHER | JOHNS HOPKINS HLT COE SCALE PROGRAM

MAY 2019 – AUGUST 2019

- Worked with small research team on topic identification and named entity recognition tasks
- Utilized TensorFlow to analyze effects of reduced- and partially reduced-size training sets
- 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)
- Conducted unsupervised K-means clustering using Python Scikit-learn module
- Delivered Azure webapp built with Flask to analyze uploaded images

Projects

See more on my website's "Projects" page

- Full-stack webapp: registration/advising system developed on a LAMP AWS server April-May 2019
- Heart rate monitor: data gathering/analysis system using Arduino, C, and various sensors April-May 2019
- 2019 SEAS Hackathon project: "Friendly FOIA" – a tool to automate FOIA requests for journalists February 2019
- Software Engineering Project: "Alien Attack" – an arcade-style game in Java December 2018

Skills & Abilities

TECHNICAL SKILLS

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

LEADERSHIP/TEAMWORK

- Layout Manager, GW Undergraduate Review September 2017-Present
- President, GW Robotics April 2018-Present