Zachary R. Holbrook

Centerville OH, 45459 | 937.344.8169 | Holbrook.224@osu.edu
Personal Website: https://www.zholbrook.com/
LinkedIn: https://www.linkedin.com/in/zachary-holbrook-a9a344157/

EDUCATION

The Ohio State University, College of Engineering — **Columbus, OH**
Bachelor of Science in Engineering — ***Graduation**: May 2021*
***Major**: Computer Science and Engineering* — ***GPA**: 3.50*

- **Fundamentals of Engineering Honors**: Intensive engineering and problem-solving coursework during student's first year

TECHNICAL PROFILE

- **Languages:** Java, Python, TypeScript, JavaScript, HTML, CSS, SQL
- **Technologies**: AWS, Angular, React, Node.js, Terraform, Docker, Git

PROFESSIONAL EXPERIENCE

Capital One — **McLean, VA (Virtual)**
Software Engineering Intern — *June 2020 – August 2020*

- Engaged in an Agile environment utilizing JIRA to define and populate stories to delineate the requirements of the project
- Produced Angular web application using D3JS and DataTables.net to feature 17 Key Resiliency populated by an aggregated data pull from AWS Lambda which determine the risk and reliability of all applications across Capital One
- Queried Snowflake database using SQL, Python, and AWS Lambda to source data using CloudWatch and send to S3 bucket
- Configured and deployed AWS infrastructure for 9 Lambda's and an S3 bucket leveraging Terraform and Docker

General Electric — **Cincinnati, OH**
Digital Technology Intern — *May 2019 – July 2019*

- Collaborated in an Agile environment to analyze team's requirements and create user stories to shape vision of the project
- Produced Angular7/ExpressJS web application with Bootstrap4 and New Relic Analytics to display important server metrics with authentication service and 100% test coverage utilizing Karma/Jasmine and Mocha/Chai packages
- Aided development on Angular8/Golang multitenant application facing 650,000 clients across various companies
- Constructed and documented CI/CD pipeline through GitLab repository and into an AWS EC2 instance using Docker

Tenet3 LLC — **Dayton, OH**
Cyber Security Intern — *July 2018 – August 2018*

- Worked in an Agile environment utilizing GitFlow methodology to help build networking web application
- Transitioned data using RESTful API to Jupyter Notebook and designed Network reliability graph using NetworkX library
- Provided analyses on a systems security by identifying potential vulnerabilities for DOD and private sector companies

PROJECTS

IBM Watson Recipe and Playlist Generator

- Allows users to input ingredients and auto generate various recipes with associated playlists to listen to during meal prep
- Utilized IBM Watson Discovery service to train a model and query recipe data and generate recipes based on ingredients
- Developed Django web app and scraped nearly 1000 recipes from various web sources to train model and extract key insights
- Implemented Spotify using open-source API for users to have auto-generated playlist determined by cuisine and cook time

Custom Interpreter

- Built a custom interpreter for professor's custom language, Quandary, with fully functional parsing, static and dynamic checking, mutability, threading, and pre-defined built-in functions through Java OO development practices
- Optimized speeds using concurrency synchronization and java reentrant locks to handle data races and threading blocks

Data Mining Seoul Bike Dataset

- Mined a set of bike rental data from Seoul and cleaned it for analysis using Python and Pandas data-frames
- Classified clean data set with Scikit-learn and projected data into multiple graphical interfaces with matplotlib

LEADERSHIP AND INVOLVEMENT

Ohio State Women's Basketball Team Practice Player — **Columbus, OH**
Ohio State Student-Athlete — *February 2019 – May 2021*

- Scrimmage against Varsity Women's Basketball Team to prepare them for games and tournaments throughout the season
- Compete in drills by rebounding and developing various offensive and defensive schemas to develop Varsity team chemistry

Ohio State Artificial Intelligence Seminar — **Columbus, OH**
Undergraduate Member — *September 2017 – May 2021*

- View highlights of artificial intelligence research presented by Ohio State Graduate and PhD students and Professors
- Discuss cutting edge developments within the field of AI by presentations representing code and theories behind the work