

Zachary R. Holbrook

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EDUCATION

The Ohio State University, College of Engineering

Columbus, OH

Bachelor of Science in Engineering

Expected Graduation: May 2021

Major: Computer Science and Engineering | **Minor:** Economics and Philosophy

GPA: 3.36

- **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, Node.js, Terraform, Docker, Git

PROFESSIONAL EXPERIENCE

Capital One

McLean, VA (Virtual)

Software Engineering Intern

July 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 Node and Edge graph leveraging NetworkX library
- Provided analyses on a systems security by identifying potential vulnerabilities for DOD and private sector companies

PROJECTS

Twitter Sentiment Analysis

- Utilized Open-Source Twitter API to pull fresh twitter data and extract tweets for notable political figureheads
- Analyzed data pull through a sentiment analysis model and used custom Flask API to send data to Angular frontend
- Implemented AWS Lambda and CloudWatch event to source fresh data based on a cron job schedule for up-to-date tweets

Statistical Analysis Basketball Data

- Utilized Kaggle data set of Kobe Bryant's shot data over 10 years and cleaned it for analysis
- Analyzed clean data set and projected into multiple graphical interfaces with matplotlib based on the varying data fields

Autonomous Robot Design Competition

- Led a team of 4 individuals designing, coding, and documenting an autonomous robot that completes pre-defined objective
- Modeled the robot in SolidWorks and coded in C with QT Creator using a microcontroller as central power source
- Finished in 7th place out of 65 teams in Ohio State Fundamental of Engineering Honors competition

LEADERSHIP AND INVOLVEMENT

Ohio State Women's Basketball Team Practice Player

Columbus, OH

Ohio State Student-Athlete

February 2018 - Present

- 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

Alpha Kappa Psi Professional Business Fraternity

Columbus, OH

Innovation Committee Member

January 2018 - Present

- Sat on Innovation Committee to drive chapter development for new programs and brotherhood resources for interviewing
- Selected as 1 of 340 potential candidates to undergo an intensive 9-week professional development process focusing on leadership, communication, and presentation skills

Ohio State Artificial Intelligence Seminar

Columbus, OH

Undergraduate Member

September 2017 - Present

- 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