1119 Bicentennial Parkway
Ann Arbor, MI

Samuel Herner

https://www.linkedin.com/in/samuel-herner/

(734) 904-7550
hernersa@umich.edu

EDUCATION

University of Michigan — Ann Arbor, MI
College of Engineering — *2021-2024*
B.S.E. Computer Science; Minor in Statistics

- GPA: 3.729/4.00 : Magna Cum Laude
- Dean's Honor List: Fall 2021, Winter 2022, Winter 2023, Fall 2024
- Coursework: Data Structures and Algorithms, Discrete Math, Introduction to Computer Organization, Foundations of Computer Science, Statistical Computing, Applied Statistical Methods, Web Systems, Database Management Systems, Introduction to Machine Learning, Statistics and A.I., Human-Centered Software Design and Development, SWE

Michigan State University — Ann Arbor, MI
College of Engineering — *2020-2021*
Computer Science

- GPA: 4.00/4.00
- Dean's Honor List: Fall 2020, Winter 2021

Technical Skills

C++, SQL, R, HTML/CSS, JavaScript, React, REST APIs, Java, Python, Bash, scikit-learn, Yaml, Azure DevOps, Conan, Docker, Jenkins, Artifactory, Azure Cloud, Bitbucket, Git, TensorFlow, Keras, PyTorch, Doxygen, Json, SDLC, Flask

WORK EXPERIENCE

Bosch — Plymouth, MI
Software Engineer/DevOps Engineer Intern — *05*/2023-Current

- Designed Python and Bash scripts to streamline the operations of the development team, optimizing the execution of Azure pipelines
- Used Conan for automating package creation in diverse pipelines, further enhancing the automation and reliability of our package management processes
- Designed stages for pipelines to assess code coverage and set coverage gates for the other software teams
- Used PlantUML to create diagrams along with Doxygen to automatically generate documentation for the code database
- Utilized Docker images and the development container plugin to establish a synchronized development environment for the team of developers
- Implemented Docker image caching on Azure virtual machines, significantly reducing Docker image pull times across CI/CD pipelines

University of Michigan Information and Technology Services — Ann Arbor, MI
Quality Assurance Tester — *05/2022-08/2022*

- Conducted comprehensive analysis of applications to enhance user experience, ensuring the utmost intuitiveness
- Collaborated with other technical teams in ITS and U-M to anticipate and evaluate software changes that may impact the hardware supported by MiWorkspace, specifically addressing Mac and Windows compatibility concerns

PROJECTS

GitHub Pull Request Expiration Dates (Python/Bash)

- Utilized Git Hooks and bash scripts to establish a date for when a pull request should expire
- Used YAML to create a stage on the pull request pipeline to create an expiration date for each pull request
- Developed a pull request pipeline to monitor open pull requests and ensure that no pull requests expired
- This tool saved hours of time and allowed all open pull requests to be merged each day if needed, instead of only having the ability to merge 5 pull requests each day

Cinematic Sentiment Analysis (AI/ML)

- Leveraged Prime Video review data to train Support Vector Machines (SVMs) for sentiment classification, enhancing movie selection efficiency
- Employed a dictionary-based approach to transform reviews into binary feature vectors with binary feature vectorization
- Explored diverse SVM configurations and optimized them using 5-fold cross-validation for essential performance metrics

Fakebook Database (SQL)

- Devised a relational database to store information for the fictional social media platform Fakebook
- Used Flask to manage and create APIs dedicated to transforming data.
- Designed an entity relationship diagram to address given business constraints of platform and translated it into relational tables
- Utilized SQL*Plus to populate database and create external views to enable viewing of aggregate data

Traveling Salesman Problem Solver (C++)

- Implemented Prim's algorithm to efficiently find a path between a set of points, prioritizing speed in solution generation
- Developed a Generate Permutations function combined with branch and bound technique to identify the optimal shortest path among a set of points, ensuring accuracy in solution determination
- Honed skills in algorithmic problem-solving, data structures, and optimization strategies within the domain of combinatorial optimization

Deploy Subnets (AWS, Terraform)

- Utilized Terraform to define and manage AWS infrastructure, ensuring consistent and repeatable deployments
- Deployed a custom Virtual Private Cloud (VPC) with a custom subnet and tailored firewall rules, ensuring a secure and isolated private network environment

Volunteering

Adaptive Sports and Fitness *05*/2023-Current

- Coaching Individuals with Disabilities in Tennis: Provide personalized tennis coaching sessions for both adults and children with disabilities every other Monday
- Facilitating Adaptive Sports Events: Organize and manage adaptive sports events, ensuring smooth execution and inclusivity for all participants

Global Talkers *01*/2023-05/2024

- Met with young adults from Argentina every Monday, conversing in English to enhance their language proficiency