Charles Werk

Software Engineer

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# Objective

Aspiring Data Engineer and Software Engineer with a BS in Computer Science, specializing in Python, Java, and data analytics. Experienced in data management, SIEM integration, and advanced data techniques. Passionate about driving business intelligence, improving decision-making, and contributing to innovative projects through technical expertise and a unique perspective.

# Education

## University of Montana, Missoula, MT

**Major**: BS in Computer Science, Concentration in Software Engineering, May 2024

**Relevant Coursework:** Data Structures and Algorithms, Database Management, Big Data Analytics, Cloud Computing Essentials

## Aaniiih Nakoda College, Harlem, MT

Major: AS in Computer Information Systems, 2019

# Skills & abilities

* **Programming Languages**: Python, Java, HTML/CSS, PHP, JavaScript, TypeScript
* **Data Management**: SQL/NoSQL, Data Pipelines, ETL Processes, Databases
* **Analytics & Visualization**: NumPy, Pandas, Tableau
* **Development Tools**: Django, React Native, Android Studio, Node.js, Firebase
* **Cloud Platforms**: Microsoft Azure, AWS, Google Cloud Platform, Firebase
* **Automation & Integration**: Ansible, Docker, Hypervisors, SIEM Integration, Terraform, Kubernetes
* **Big Data Technologies**: Hadoop, Spark, Kafka
* **Machine Learning & AI**: Scikit-Learn
* **Version Control**: Git, GitHub, GitLab
* **CI/CD**: Git Workflows
* **Scripting Languages:** Bash, PowerShell
* **Web Development:** RESTful APIs, GraphQL
* **Testing & Debugging**: Unit Testing, Integration Testing, Selenium
* **Project Management:** Agile, Scrum, JIRA
* **Security:** Basic principles of encryption, authentication, and network security
* **Collaboration & Communication**: Strong interpersonal skills, experienced in team projects and leadership roles

# Professional Experience

## Security and Systems Intern, Island Mountain Development Group

## June 2024 – Present (until July 26)

## Cybersecurity Implementation: Researched and implemented security measures, enhancing the organization's overall cybersecurity posture.

## SIEM Integration: Integrated SIEM solutions using Ansible automation, improving threat detection and incident response.

## Wazuh and ELK Stack Integration: Set up and maintained Wazuh with the ELK stack, including integrations with MISP, OPENCTI, and Virus Total API, enhancing security monitoring and analysis.

## Log Management: Managed and analyzed syslogs, optimizing the SIEM setup for better data insights and security operations.

## Retail Operations Internship, Caras Nursery and Landscaping, LLC

Jan 2024 – May 2024

* **Thermal Printing Solutions**: Automated labeling process, reducing errors and improving product identification accuracy.
* **Product Labeling System**: Developed a system that automated label generation for over 90% of stock, enhancing workflow, reducing processing time, and increasing sales throughput.
* **Inventory Control**: Organized and streamlined the SKU system, improving inventory tracking and accuracy.

## Natural Resource Management Laboratory Intern, University of Montana

**2022 – 2023**

* **Developed** a Virtual Reality fire simulation game using Unreal Engine 5, focusing on data-driven fire spread physics to aid first responders.
* **Utilized Python** for data analysis and modeling, enhancing the simulation's realism and educational value.

## Digital Marketing Intern, Montana High Tech Business Alliance, Missoula, MT

**2021 – 2022**

* Spearheaded a project to analyze website traffic and social media engagement using Google Analytics and social media tools, resulting in a 20% increase in user engagement.
* Improved the organization's digital footprint by developing and implementing content strategies based on data-driven insights.

# Projects

## SIEM Integration and Automation Project

* **Objective:** Researched and analyzed the integration of SIEM with Ansible automation to enhance security monitoring and incident response.
* **Implementation**: Integrated Wazuh with ELK stack, and incorporated MISP, OPENCTI, and Virus Total API.
* **Outcome:** Improved threat detection and streamlined incident response, enhancing the overall security posture.

## Data Engineering Project, University of Montana

* **Objective:** Developed a machine learning clustering algorithm using Python, Pandas, and Scikit-Learn to uncover hidden patterns in large datasets, enhancing data-driven decision-making.
* **Implementation:** Executed data preprocessing, feature selection, and algorithm optimization to identify distinct clusters, revealing critical insights for strategic applications.
* **Outcome:** Achieved a robust categorization of data points, providing actionable intelligence that informed future strategies.

## Full Stack Development Capstone Project, University of Montana

* **Objective**: Designed and launched a React Native mobile stargazing app for the Institute of Tourism and Recreation Research (ITRR), improving access to tourism resources and engagement.
* **Development**: Conducted comprehensive stakeholder interviews for requirement gathering, implemented a user-centric design with Figma, and developed a scalable backend with Node.js and Google Firebase.
* **Features & Impact**: Introduced key features such as interactive maps and event calendars, leading to enhanced user experience and interaction.