Mainul Hossain

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SUMMARY

Versatile and solutions driven Site Reliability Engineer with a strong background in cloud infrastructure, automation, and systems administration. Proficient in managing and optimizing Microsoft Azure and AWS environments, with hands on experience in Docker, Kubernetes, and infrastructure as code practices. Skilled in scripting with Python, Bash, and Ruby for automation, monitoring, and API integrations. Demonstrated success in high pressure support environments, incident management, and cost optimization projects.

Research interests include machine learning, deep learning, and explainable AI (XAI), with practical exposure to cybersecurity and system reliability. Adept at collaborating across teams, adapting quickly to evolving technologies, and driving operational excellence in both cloud and hybrid infrastructures.

WORK EXPERIENCE

Site Reliability Engineer - Optimizely Inc.   Jun 2025 - Present

Part of **Reliability/Platform Engineering** Team

- Contributed to maintaining the reliability, scalability, and performance of Optimizely's cloud-native SaaS infrastructure.
- Implemented well scoped improvements and automation tasks within internal systems, including CI/CD enhancements and containerized workflow optimization.
- Actively participated in incident response processes and change management, following SRE principles to ensure platform stability.
- Developed and maintained internal documentation and monitoring workflows aligned with departmental standards.
- Collaborated across teams to support service delivery and application lifecycle operations.
- Continued to expand knowledge in system lifecycle management, infrastructure-as-code practices, and secure deployment workflows in AWS and Azure.

Managed Services Engineer - Optimizely Inc.   Mar 2024 - June 2025

Part of **Strategic Support Solutions** Team

- Use of **Docker/Kubernetes** for deploying Python virtual environments for execution of python scripts for auditing and automation processes.
- Part of **Service Optimization** for customer **Azure infrastructures** for Black Friday Campaigns and Cost-Saving/Efficiency initiatives.
- API **development and integration** using Python, primarily focusing on **automation process** development and Cost-Saving initiatives.
- Development of **Bash Scripts for .NET core systems** for automating troubleshooting processes for Azure web applications
- Developing **Python and PHP** based scripts for API integrated **Data Extraction and processing**.
- Designed and implemented Infrastructure as Code (IaC) using **Terraform** to automate Azure resource provisioning.
- Enhanced CI/CD pipelines for microservices deployment using **GitHub Actions**, reducing deployment time by 30%.
- **Data Extraction** from **Microsoft Azure** KQL services for optimization of Web-based applications and troubleshooting
- System Troubleshooting and administration of Customer **servers** via Windows Server, SQL Server, and IIS for operation in a fast-paced, high-transaction NOC for **managed hosting environment** and Data Security protocols using Virtualization.
- Maintenance and Data Troubleshooting of **AWS and Cloudflare CDN** Services Management
- Served as a **Microsoft Azure Administrator**, managing and troubleshooting client web applications hosted on Microsoft Azure within the Optimizely DXP platform and domain.
- Still working part time on Incident Management team for troubleshooting and mitigation of Customer based Incidents and Outages for both Azure/AWS cloud solutions as well as On-Site solutions.

Associate Managed Services Engineer - Optimizely Inc.   Sep 2022 - Mar 2024

Part of **Incident Management** Team

- Played a crucial role in the high volume **incident** surges during high campaign windows such as Black Friday, Christmas, New years, for scaling and maintenance of **Client web applications** and Databases during high traffic windows.
- Managed and assigned workload during **major outages and Cyberattacks** on On-premises Datacenters as well crisis situations regarding Major Microsoft Region outages.
- Responsible for handling **client code and database deployments** as a first responder to any sudden break in process and restoring client SQL Database and Web based code applications.
- Managing Network configuration and management using F5 Systems for **Multi Cloud Security** and Application Delivery for Supporting web-based applications
- Tasked as **Microsoft Azure Administrator**, for Optimizely DXP platform, responsible for handling and troubleshooting all clients web applications being hosted on Microsoft Azure under Optimizely Domain.
- Tasked with standard departmental operating procedures, including accurately logging and updating all service tickets using the defined tracking software and utilizing handover and escalation processes.

Information Technology Officer - University Of Scholars   Mar 2022 - Sep 2022

Part of **Information Technology** Team

- Built and maintained primary Database, Software Components, Front end web systems and back end server database systems for Inventory management using PHP, HTML, CSS, Bootstrap MySQL Database, XAMPP (Apache server) & Python
- Responsible for deploying Organization wide Windows Server system for organization domain control and device monitoring along with server security and Client device IP configuration
- Assisted in University Database management, design and maintenance
- Managed the design, installation and management of organization-wide local area network, wide area network and internet system
- Basic skills such as configuration of IP devices, knowledge of Microsoft Windows framework among other miscellaneous tasks

EDUCATION

May 2015 - Jan 2022   B.Sc in Computer Science - BRAC University   (GPA: 3.14/4.0)

SKILLS

Programming -	Python, SQL, KQL, Bash, Java, PHP, Ruby, C
FrameWorks -	ASP.Net Core, Docker, Kubernetes, Node.js, React
Databases -	MySQL(SSMS), Azure Databases and Blob Storage, Amazon S3, Apache DB
Operating Systems -	Windows, Linux, MacOS
Miscellaneous Tools -	Postman, Terraform VSCode, SSMS, Git, Microsoft Azure Portal, AWS EC2, Datadog, NewRelic, Pingdom, Cloudflare.

CERTIFICATIONS & AWARDS

Microsoft Certified: Azure Administrator Associate   Issued June 2024

Microsoft Corporation - **Credential ID MS0995597094**

Spot Award   Issued Aug 2023

Optimizely Spot Award for "Never Stop Improving"

Spot Award   Issued Apr 2023

Optimizely SPOT Award for "Getting it done together"

Introduction to Programming Using Java   Issued Mar 2018

Top Up IT and ITES Foundation Project, LICT Project, ICT Division, Government of Bangladesh - **Credential ID G047514**

PERSONAL PROJECTS

Pingdom API hostname check   Link to project

A simple Plug and Go Python Script for running multiple sites Pingdom Checks concurrently and generating the output to a CSV file

Cloudflare DNS Extraction using Docker container   Link to project

Contains multiple Python scripts for various API based Data Extraction from Cloudflare zones such as extracting WAF Bypass rules for Cloudflare zones along with Origin Server CNAME information and generating output to a CSV file

.NET CORE master monitoring   Link to project

A master/modular shell script designed to call various diagnostic tools for troubleshooting Linux based .NET Core environments

Cloudflare API Integration Scripts   Link to project

Python script is designed to extract DNS records from Cloudflare zones and save the extracted data into a CSV file

PUBLICATIONS

A Biofeedback controlled personalized Virtual Reality (VR) based Exercise game
KUI 2021 : 19th ACM Conference Culture and Computer Science – Physical und Virtual Spaces

Early Stage Detection and Classification of Colon Cancer using Deep Learning and Explainable AI on Histopathological Images
Awaiting Publication