Matthew D. Spitzer, PhD, CISSP
5070 Scenic View Dr. SW
Rochester, MN 55902
(507) 990-9065
spitzer.matt@gmail.com

Professional Experience

Principal Information Security Engineer   **11/2020 - present**
Supervisor – Rosalie Bakken
Mayo Clinic Rochester, MN

- Design enterprise-scale security architectures for on-premise and cloud-based deployments of analytic platforms
- Design and develop a cloud-based data lake for large-scale data consumption and analytics
- Develop machine learning models to analyze anomalous behavior in security data utilizing autoencoders, DNN, CNN, GAN, etc.
- Develop visualizations for metrics consumption by senior and executive leadership
- Provide expert insight into design and architecture decisions related to security platforms and analytic capabilities
- Mentor colleagues in the development of AI-based models for predictive analysis
- Led and managed technical discussions related to security enhancements, analytic results, and data quality
- Lead and manage incidents as they are identified by colleagues within information security
- Administer and manage the on-premise and cloud platforms for security-related data, including ETL processing, analytic insights, and predictive analysis
- Develop and maintain internal and external relationships with vendors and business service customers, including executive leadership
- Utilize Python, Looker, and Tableau for visualizing data at scale
- Lead and contribute to project goals, defining practical outcomes and realizing improved resource utilization and stronger security posture for the organization
- Collaborate with Security Operations, Threat Intelligence, Threat hunting, and Cybersecurity engineering to develop a robust environment for incident response and threat mitigation

Lead IT Systems Engineer   **08/2015 – 11/2020**
Supervisor – Jeff Davis
Mayo Clinic Rochester, MN

- Align and develop a secure cloud strategy with division and section goals with extensive cloud knowledge and experience
- Lead a team of 9 colleagues providing oversight on administrative activities related to annual reviews, timecards, and personnel-related activities
- Manage workload across team members for efficient project assignment and completion
- Administer and manage the .NET and WebSphere infrastructure associated with the internal web-hosting environment for Mayo. Sites include Rochester, Arizona, and Florida, in addition to the Mayo Clinic Health System satellite branches
- Administer and manage the Linux infrastructure environment for Mayo
- Lead large, complex projects for the enterprise to provide additional services and features and security to our customers as well as patients
- Lead technical discussions related to new technology enhancements to the deployment process and work with the build and deploy a team to implement the strategy within our environments

- Lead and manage technical discussion and oversight for the .NET environment, including enhancements, security, process improvement, application uptime, and server capacity planning
- Mentor colleagues on new technologies, providing direction on implementation, and provide technical experience for issue resolution
- Mentor operations team members in managing the operational queue and response for issue resolution
- Manage infrastructure costs associated with cloud deployments
- Develop and maintain internal and external relationships with vendors and business service consumers
- Represent our unit and division in executive leadership meeting, architecture board meetings, and vendor engagements
- Develop strategy and roadmaps for infrastructure and security to support section and division goals
- Work in a team setting to provide superior customer service, application hosting management, and problem resolutions for WebSphere, .NET and Tomcat environments
- Manage costs associated with team needs and request purchases as needed for tooling and software
- Lead and develop strategic security implementation plans to accommodate controls associated with securing the Mayo enterprise
- Utilize IAM roles and bindings to allow secure access to infrastructure and applications as needed

Adjunct Professor   **12/2012 – present**
Supervisor – Brenda Frame
RCTC Rochester, MN
- Develop a curriculum and capstone program about Data Science and Machine Learning
- Develop curriculum and courses for Cybersecurity AAS supporting NSA CAE-CD designation
- Provide instructional guidance on PHP, MySQL, JavaScript, and Mobile Application Development
- Educate on varying topics including web design using PHP, HTML, HTML 5, server and client-side scripting, iOS development, Android development, computer and cybersecurity, and Windows Phone development
- Collaborate in the creation of course outcomes

Adjunct Professor
Supervisor – Jayant Anand   **08/2013 – present**
NHCC Brooklyn Park, MN
- Develop curriculum and courses for Cybersecurity AAS supporting NSA CAE-CD designation
- Provide instructional guidance on PHP, MySQL, JavaScript, and Mobile Application Development, Database design and architecture, computer and cybersecurity, and SQL programming
- Instruct on varying topics including web design using PHP, HTML, HTML 5, server and client-side scripting, iOS development, Android development, and Windows Phone development, as well as Database modeling and architecture and SQL programming
- Collaborate in the creation of course outcomes
- Member of the MnSCU Data Analytics Network (MDAN) group collaborating with other institutions on developing curriculum and deriving best practices on teaching and designing big data courses

Sr. IT Systems Engineer   **08/2010 – 08/2015**
IT Systems Engineer
Supervisor – Jeff Davis
Mayo Clinic Rochester, MN

- Administer and manage the .NET and WebSphere infrastructure about the internal web-hosting environment for Mayo. Sites include Rochester, Arizona, and Florida, in addition to the Mayo Clinic Health System satellite branches

- Lead and manage the deployment process for all shared environments throughout the Middleware footprint (Java, .NET, MayoWeb, ColdFusion, Interface/MQ, Business Intelligence)
- Lead large projects for the enterprise to provide additional services and features to our customers as well as patients
- Lead technical discussions related to new technology enhancements to the deployment process and work with the build and deploy a team to implement the process within our environments
- Lead and manage technical discussion and oversight for the .NET environment, including enhancements, security, process improvement, application uptime, and server capacity planning
- Mentor colleagues on new technologies, providing oversight on implementation, and provide technical experience for issue resolution
- Mentor operations team members in managing the operational queue and response for issue resolution
- Work in a team setting to provide superior customer service, application hosting management and problem resolutions for WebSphere, .NET and ColdFusion environments
- Design and develop secure web applications using .NET to automate tasks enabling developers to perform operational tasks related to their applications
- Work closely with development colleagues to design and structure our environments to meet the growing needs of the enterprise
- Architect new application development designs to meet the needs of future growth and technology including security enhancements
- Design and build new network load balancing configurations to enable high availability for applications
- Provide on-call service to ensure 24/7 availability of applications and infrastructure
- Assist in the design of the WAS7 architecture, deployment integration, and support process
- Aid in the design of the WebSphere HealthCheck process to enable developers to recycle JVM's and check JVM statistics
- Work within a team setting, providing operational support to the Middleware Web team in areas such as Java/WebSphere support, .NET Support, Business Intelligence, and Interface/MQ support
- Perform tasks related to managing and troubleshooting JVM's, node agents, clusters, application pools, IIS, and reporting
- Maintain and manage the operational queue to provide the first point of entry and issue resolution for the web team
- Lead the design effort to automate daily issue tracking, response, and monthly metrics gathering for the operations team
- Utilize IAM roles and bindings to allow secure access to infrastructure and applications as needed

Analyst/Programmer   **05/2008 – 08/2010**
Supervisor – Maureen Drews
Mayo Clinic Rochester, MN

- Developed database systems in MS Access and MS SQL for end-users to track and manage clinical and research-related information
- Developed interfaces for users to interact with their database system, using RAD or Visual Studio.NET
- Worked in a team setting to develop web-based applications for users to initiate study interface creation
- Provided statistical analysis utilizing JMP and SAS for data sets in preparation for publication
- Provided ongoing support and training for existing legacy database systems
- Collaborated with team members to develop new database systems and models
- Administrator for systems utilized for area work needs

Ph.D. in Information Technology
Graduated: May 2021
Capella University, Minneapolis, MN

Master of Science in Information Technology
Specializing in Enterprise Software Architecture
Graduated: March 2013
Capella University, Minneapolis, MN

Bachelor of Science in Computer Science
Graduated: September 2007
Baker College, Flint, MI

Associate of Applied Science in Computer Programming
Graduated: June 2006
Baker College, Flint, MI

Certifications

Certified Information Systems Security Professional (CISSP)
Awarded: February 2022
Member ID: 917900

Technical Experience/Training

Internet and Programming	JavaScript, Java and Web Graphics, HTML, HTML5, XML, PHP, XSL, DHTML, Perl, C++, C#, JQuery, AJAX, ADO, Apache Server, Crystal Reports, CSS, Mobile, SAML, iOS, Android, Windows Phone, Tomcat, Azure, AWS, UrbanCode Deploy, Python, Tableau
Microsoft Technologies	ASP.NET, VB.NET, IIS, Terminal Server, TFS, Visual Studio, PowerShell, Azure
Database Administration	SQL Server, Oracle, Microsoft Access, MySQL, DB2
Software	Open Office, Adobe Photoshop, Rapid Application Developer, Websphere, RAD, Eclipse, WAS, MayoAccess, SAS, Publisher, Business Objects (BOXI), PVCS, JMP, Lab3, Cloverleaf, HL7, Filemaker
Project Management	Visio, Project, MS Office, Adobe Illustrator
Operating Systems	UNIX, Linux, Windows, Mac OS X, AS/400
Security Technologies	Google SecOps, SIEM, SOAR, Kali Linux, ISC2 Certified