MICHAEL BECKER
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PROFESSIONAL SUMMARY

Cybersecurity Engineering student with hands-on experience in data analytics, vulnerability assessment, and secure system design. Proven ability to analyze large datasets using SQL and Python while implementing security protocols and conducting penetration testing. Seeking entry-level cybersecurity analyst role to apply technical skills in threat detection, incident response, and security operations.

TECHNICAL SKILLS

Security Tools: Splunk, Nessus, Metasploit, Wireshark, Volatility, Aircrack-ng, OpenVAS, PfSense
Programming Languages: Python, Java, JavaScript, C, C++, SQL, PowerShell, Bash, HTML
Machine Learning: scikit-learn, threat detection modeling, anomaly detection, security analytics
Cloud Platforms: AWS (EC2, S3, Lambda), cloud security architecture, scalable deployment
Data Analytics: Power BI, Microsoft SQL Server, statistical analysis, data visualization
Operating Systems: Linux (RHEL, Ubuntu, CentOS), Windows Server, macOS
Frameworks & Standards: NIST Cybersecurity Framework, ISO 27001, OWASP Top 10
Development Tools: React.js, Spring Boot, MySQL, Android Studio, Git, WebSockets

EDUCATION

Iowa State University, School of Engineering
Bachelor of Science in Cyber Security Engineering | December 2025

- Dean's List | Journey Scholarship Recipient
- **Relevant Coursework:** Wireless Network Security, Application of Cryptographic Concepts to Cyber Security, Operating System Security, Software Analysis and Verification, Linux Operating System Essentials

RELEVANT EXPERIENCE

Consultative Analytics Intern | **Broadspire** | **[August – May, 2025]**

- Collaborated with engineering team to analyze claim data trends using SQL and Power BI for data visualization and reporting
- Developed Python scripts to process and format years of historical claim data for integration into Microsoft SQL Server
- Performed data analysis on large datasets to identify patterns and insights supporting business decision-making
- Created automated data pipelines to streamline data processing and improve analytical workflow efficiency

Cybersecurity Research and Analysis | **Iowa State University** | **2023-Present**

- Performed penetration testing using Splunk, Nessus, and Metasploit to identify vulnerabilities and develop incident response plans
- Designed and implemented secure network systems using firewalls, VPNs, and IDS/IPS systems while conducting vulnerability assessments
- Monitored security logs and alerts using SIEM tools to detect, analyze, and respond to potential cyber threats
- Conducted forensic investigations using Splunk and Volatility while analyzing network traffic using Wireshark
- Designed and deployed role-based access control systems implementing multi-factor authentication
- Conducted IT audits and SOC examinations to evaluate compliance with ISO 27001 and NIST frameworks

PROJECTS

Machine Learning Threat Detection System | **Personal Project** | **[Current]**

- Developing machine learning model to analyze and classify security threats using Python and scikit-learn
- Implementing cloud-based deployment on AWS infrastructure for scalable threat detection capabilities
- Designing automated threat analysis pipeline to process security logs and identify anomalous behavior patterns
- Integrating real-time monitoring capabilities for continuous system security assessment

SmartClass Web Application | **Senior Design Project** | [**Spring 2024- Fall 2025]**

- Developed full-stack web application using React.js frontend and Spring Boot backend with MySQL database
- Implemented real-time communication features using WebSockets for live classroom interaction and polling
- Designed role-based authentication system supporting students, teachers, and teaching assistants
- Created responsive user interface with anonymous Q&A capabilities and interactive classroom activities

Wireless Security Analysis | **CprE 4370X** | **Fall 2025**

- Analyzed security vulnerabilities in cellular networks, WiFi protocols, IEEE 802.15 technologies, and RFID systems
- Conducted penetration testing on wireless infrastructure using Aircrack-ng and protocol analysis tools
- Developed comprehensive security assessment reports on MANET and V2X communication protocols

Cryptographic Implementation Project | **CprE/CybE 3310** |

- Implemented AES, RSA, and elliptic curve cryptographic algorithms using Python and OpenSSL libraries
- Designed secure key distribution and authentication systems following industry best practices
- Analyzed SSL/TLS protocol implementations and documented security vulnerabilities and countermeasures

Operating System Security Analysis | **CprE/CybE 4400** |

- Conducted vulnerability analysis on Linux kernel modules and implemented security hardening procedures
- Analyzed Android SELinux configurations and iOS security mechanisms for mobile platform assessment
- Implemented access control mechanisms and studied secure microkernel architectures including seL4

Software Vulnerability Assessment | **CprE 4210** |

- Performed static and dynamic analysis on software applications to identify buffer overflow and injection vulnerabilities
- Applied OWASP Top 10 methodology to web application security testing with automated scanning tools
- Developed vulnerability remediation recommendations and documented security best practices

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ADDITIONAL EXPERIENCE

Additional work experience available upon request