

# Amir Hamza

## Contact

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## Links

amirhmz.com

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## Education

Iowa State University  
Bachelor of Science  
Computer Engineering

### Graduation

May 2021

## Skills

### Languages

Java, C#, Kotlin, C,  
JavaScript, and TypeScript

### Frontend

Bootstrap, React.js,  
Angular, and Android SDK

### Backend

Spring Boot, Node.js, and  
.NET

### Databases

Microsoft SQL Server,  
MySQL, and MongoDB

### Clouds

AWS, Azure, Heroku, Netlify,  
and Balena

### Security Tools

Burp Suite, OWASP ZAP,  
NMAP, Netcat, and  
Metasploit



## Work Experience

### Application Security Intern - Nelnet Inc.



Remote



December'20 – May'21

- Carrying out web penetration testing of company's internal web tools and providing quality and assurance to the codebase

### Software Developer Intern - Manatt's Inc.



Remote



August'20 - December'20

- Built company's internal financial tool in **Angular** and **.NET**
- Improved Angular.js response time by **55%** by adding lazy loading, pure pipes, and caching values
- Implemented a new behavioral testing framework called **Cypress** into the frontend
- Automated continuous development of an IoT application in Balena cloud

### Application Security Intern - Nelnet Inc.



Remote



May'20 - August'20

- Developed a custom **Metasploit** malware in **C#** that bypasses antivirus detection intended for company-wide phishing campaigns and red team engagements
- Carried out web penetration testing with **Burp Suite** to find web vulnerabilities
- Provided quality and assurance of the codebase and drafted best practices for company's internal tools in **ASP.NET**
- Contributed to DevSecOps initiatives through the building and integration of security unit tests into build pipelines

### IT Security Analyst - Iowa State University



Ames, IA



August'19 - May'20

- Carried out web penetration for **300+** websites with **Burp Suite** vulnerability scanner
- Drafted reports to list findings, mitigation, and best practices
- Worked with developers to ensure vulnerabilities were addressed

### Software Developer Intern, Spreetail Inc.



Lincoln, NE



May'19 - August'19

- Removed reliance on third-party dependencies by creating and integrating custom frontend features for the inventory tracking **Android** app
- Built REST APIs and wrote unit tests to add new functionality
- Rewrote frontend codebase from **Java** to **Kotlin** for concise and performant code



## Projects

- Senior Design Project – Warehouse Drone:** Lead my team to develop a quadcopter to track inventory in a warehouse (**C, Java, JavaScript**)
- Independent Study - IoT Price Tag:** Worked under Professor Akhilesh Tyagi to develop a low powered IoT price-tag controlled wirelessly by a **MERN** stack web app for industry use (**C, JavaScript**)
- CS309 Final Project – Anonymous Discussion Post:** An **Android** and **Spring Boot** application intended for students to discuss controversial topics anonymously. Awarded the best backend developer in the class (**Java**)



## Leadership

- President Cardinal Space Mining Club:** Built a mining robot and lead my team to NASA's Robotics Mining Competition 2019 and stood **4th** out of **46** college teams
- President IEEE Student Branch:** Arranged company recruiting seminars in the Electrical and Computer Engineering department for **400+** club members. Consulted the department chair on strengthening the undergraduate program