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Omar M. Taylor

✓   EDUCATION:

Ames, IA   **Iowa State University**   **Fall 2014 – December 2018**
- B.S. in Computer Engineering with Minor in Cyber Security. Cumulative GPA: 3.0/4.0 **(↑)**; **Major GPA: 3.4/4.0(↑)**
- Undergraduate Coursework: Embedded Systems, Computer Networking & Data Communications, Electric Circuits, Basics of Information System Security, Software Construction and User Interfaces, Data Structures

✓   WORK EXPERIENCE:

Iowa State University – EcpE Dept.   **Research Asst. – Software Engineer**   **August 2016 – Present**
- Spearheaded agile development of mobile-friendly web app utilizing recommender systems to suggest new food recipes to users based on past preferences. *Hosted privately on GitHub*.
- Delivered software implementation with JavaScript, Node.js, MongoDB, Java, Python. Tested and Continuously Integrated.
- Communicated importance of research at conferences.

The MITRE Corporation   **Network and Infrastructure Engineer, Intern**   **May 2017 – August 2017**
- Spearheaded development and virtualization of a Smart IoT Linux Gateway Node.js application that monitors network metrics, detects anomalies, and mitigates the problem to bolster network security.
- Reverse-engineered IoT embedded systems to simulate network attacks (Spoofing, RSSI deviations).
- Researched and evaluated Z-Stack (ZigBee) to identify metrics for fingerprinting IoT traffic profiles.
- Collaboratively developed scalable & practical network-centric security architecture for IoT systems.
- Delivered C implementation of a cryptographic nonce for Embedded Systems CTF Competition.

The MITRE Corporation   **Network and Infrastructure Engineer, Intern**   **May 2016 – August 2016**
- Collaborated with a team of three to construct an Internet of Things lab, network, and challenge.
- Programmed and operated wireless IoT embedded systems to emulate existing IoT devices.
- Captured and analyzed network traffic with protocol analysis software & auto-decryption tools.
- Communicated significance of research via multiple PowerPoint presentations to large audiences.

Nintendo Enthusiast   **Deputy News Editor / Video Producer / Graphics Designer**   **Nov. 2012 – June 2014**

✓   PROJECTS:

- **Mars Rover (iRobot)** – Configured MMI/O, serial comm., ADC, SONAR, and Servo. Implemented Cartesian coordinate system to navigate robot through obstacle course autonomously and manually. C
- *Raspberry Pi Repeater* – Researched and designed with team of two others a repeater network of a VoIP connected Raspberry Pis wired to small transistor radios to allow for long-range communication. C
- *Grabbing the Weather* – Utilized API to return weather info for location when prompted. JavaScript/Node.js
- *Senior Design* – Creating a secure wireless lab using Faraday Cages, SDRs, Raspberry Pis. Cell/Wi-Fi Networks.
- *Data Structures Projects* – Implemented stacks, queues, lists, trees, & searching sorting algorithms. Java

✓   SKILLS (I = Beginner, II = Intermediate, III = Advanced, IIII = Expert):

- **Languages & Frameworks:** JavaScript/Node.js (IIII), Java (III), C (II), C# (I), Python (II), MongoDB (III), HTML/CSS (II)
- **Computer & Networking:** Embedded Systems (II), Linux (II), Security (II), Internet of Things (II), Virtualization (II), Protocol Analysis (II), Software Analysis (I), Databases (II)
- **Other Technical & Interpersonal:** Continuous Integration (I), Scrum, Public Speaking (III), Project Mgmt. (I), MS Office (II)

✓   **Honors:** *1st Place at ISU Cyber Defense Competition, Eagle Scout, National Achievement Semifinalist, 5th Place at SFCFL Student Congress Tournament*