

## EDUCATION

**Iowa State University, Ames, IA** **Cumulative GPA: 3.34/4.0** **Expected: May 2020**

### Bachelor of Science in Software Engineering, Minor in Data Science

Research and Teaching Assistant, Software Engineering Mentor, HSF Scholar, College of Engineering Dean's List, Hack ISU (Spring 2017, Spring 2018, Fall 2018)

## PROFESSIONAL EXPERIENCE

### WESTERN DIGITAL

#### Software Engineering Intern

**Hardware Development Engineer** **HDD System on Chip Development** **January 2019 - Present**

- Developed functional and code coverage ASIC verification tests for DRAM reads, writes, loads, and dumps in order to verify all possible top level testbench DRAM configurations used in enterprise hard disk drive controller SoCs. (SystemVerilog, Cadence SimVision)
- Enhanced AMBA (Advanced Microcontroller Bus Architecture) register adapters to perform byte and halfword register accesses to provide verification beyond word register accesses. (SystemVerilog, Cadence SimVision)
- Designed and implemented command line tool to automate, manage, generate, and execute custom test case regressions from queries, test case groups, and individual test cases. (Perl, MySQL, Cadence vManager)
- Redesigned test case management and tracking system to support past, current, and future hardware development projects, and developed automation services for the system. (PHP, MySQL, Python, Perl)
- Implemented feature to manage test case groups to streamline regression testing . (PHP, MySQL)

#### Software Engineering Intern

**Data Engineer** **Data Analytics Engineering** **Summer 2018**

- Designed and built distributed CI/CD pipeline for a customer hardware fleet health monitoring system for deployment across multiple servers with minimal downtime. (Bash/Shell, Jenkins, Docker, Artifactory)
- Containerized REST API in order to streamline development and production environments, and implemented CI/CD processes for automated deployment of production builds. (Bash/Shell, Jenkins, Docker)
- Built, containerized, and profiled key data pipeline components for decoding logs using a cloud computing cluster platform. (Amazon Web Services (CLI, S3, SQS), Python, Bash/Shell, Docker)

### IOWA DEPARTMENT OF TRANSPORTATION

**Software Developer** **Highway Division** **May 2017 - May 2018**

- Designed and implemented a tool for district administrators to create, view, update, and delete non-adoptable sections of highway for the Adopt-A-Highway program in Iowa. (ASP.NET, VB.NET, Oracle Database)
- Developed feature to gather resource data from DOT garages across the state, and generate resource reports for the department. (VB.NET, Oracle Database)

### IOWA STATE UNIVERSITY DEPT. OF ELECTRICAL AND COMPUTER ENGINEERING

**Research Assistant** **Data Storage Lab** **August 2019 - Present**

- Experiment with the latest storage technologies in an effort to advance robustness, security, and performance of computer systems.

**Teaching Assistant** **Digital Logic (CPR E 281)** **Fall 2018**

- Hold weekly recitations covering the fundamental principles of modern computing. Topics include Boolean algebra, combinational and sequential logic design, arithmetic circuits, registers, and finite state machines.
- Lead lab sections by motivating students and clarifying current material. Labs involve programmable logic devices (FPGA boards), simulation tools, and hardware description languages.

## SKILLS

- Java, Python, C/C++, SQL, Bash, Javascript, HTML/CSS, Perl, SystemVerilog (UVM)
- Jenkins, Docker, Amazon Web Services (CLI, S3, SQS, EC2), Artifactory
- Git, SVN, Atlassian (Jira, Confluence), Azure DevOps, Cadence (SimVision, vManager)