

# Nathan Matthew Hanson

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## EDUCATION

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### Software Engineering, BSE

Aug. 2014 – Dec. 2018

*Iowa State University*

Cumulative GPA: 3.35

## RELEVANT COURSEWORK

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### Senior Design Project II

Aug. 2018 – Dec. 2018

*Departments of Computer Engineering, Software Engineering, and Computer Science*

Collaborated with team from Principal Financial Group, Inc. and researched software-based approaches for prediction of stock market data using machine learning algorithms. Developed system that integrates machine learning into stock portfolio management and creation.

### Software Project Management

Aug. 2018 – Dec. 2018

*Department of Software Engineering*

Created an Amazon Alexa skill for easy interaction with Canvas, a class management web application used by Iowa State. Learned necessary skills required to manage and interact with a medium-sized team tasked with ground-up development of a software system.

### Advanced Programming Techniques

Aug. 2016 – Dec. 2016

*Department of Computer Science*

Learned about and subsequently implemented (in C) advanced programming concepts and techniques (e.g. dynamic memory management, polymorphism, etc.) week by week to iteratively build a complex, Rogue-like game for terminal emulators from scratch.

## PROFESSIONAL EXPERIENCE

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### Web Developer

Oct. 2016 – Present

*Iowa State University*

Contributed to College of Human Sciences website (<https://hs.iastate.edu/>) by managing/modifying Wordpress plugins, updating database information using PHP and MySQL, and collaborating with clients to complete desired tasks on a well-established deadline.

### Software Engineering Intern

May 2018 – Aug. 2018

*Cerner Corporation*

Contributed to management system that optimizes use of high-volume Population Health data. Worked with open source technologies centered around Apache's Hadoop for management of large data sets.

### Software Engineering Intern

May 2017 – Aug. 2017

*Cerner Corporation*

Created tutorial environment for future recruits to learn internal processes and methodologies related to Population Health. Created effective and efficient workflows consisting of short-term and long-term tasks using Agile Process Management model.

## SKILLS

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### Languages

*Experienced with* PHP, Java, C

*Competent in* Ruby, MySQL, Python, JavaScript, TypeScript

*Basic knowledge of* Rust, Shell Scripting, C++

### Tools and Methodologies

*Experienced with* content management systems (Wordpress), version control (Git/GitHub), test frameworks (RSpec, JUnit), shells (bash, zsh)

*Competent in* web frameworks (Ruby on Rails), AGILE software development model and related tools (Jira, Confluence), Web-based communication (REST API, AJAX), data interchange formats (JSON, YAML, TOML), HTTP/HTTPS transfer protocols, dependency management tools (Cargo, Bundler, Composer)

*Basic knowledge of* socket concepts and programming (implementation in C), continuous integration (Docker, Jenkins, Vagrant), distributed processing frameworks (Apache Hadoop)

### Operating Systems

*Experienced with* Windows, GNU/Linux

*Competent in* MacOS