

# MATTHEW HOTCHKISS

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Please take the time to check out [my website](#)

## SUMMARY

Impacting complex vertical products in creative ways. Extremely diligent, organized, and detail-oriented. Team player driving collaborative innovation to solve exciting challenges

*"No matter the task, Matthew would love to take it on and do amazingly with it"*

~ Current Manager

## EDUCATION

**Oregon State University**

GPA: 4.00

**BS Computer Science, Systems**

Graduating June 2023

- Machine Learning & Data Mining
- Artificial Intelligence
- Computer Architecture & Assembly
- Databases
- Mobile & Cloud Applications
- Computer Networks
- Operating Systems
- Algorithms

## WORK EXPERIENCE

**Lumen Learning – Remote**

Jan. 2021 → Sept. 2021 → Present

**Course Development → Software Engineer Intern**

- Architected, designed, and tested backend solutions in **Ruby on Rails** web framework
- Authored documentation, data models, flow diagrams, **Postman** collections
- Key contributor in a team of 11 engineers using **agile methods** to deliver timely solutions
- Provided and received feedback during **peer code-reviews**
- Contributed 16,000+ lines of production code on **GitHub**
- Utilized **AWS EC2, EB** to interact with environments for testing and debug support

### IMS LTI 1.3 Deep Linking

**Challenge:** Partner with Unicon, Inc. to develop a more intuitive and dynamic user flow for Lumen product integration

- Investigated and adhered to IMS Learning Tools Interoperability (LTI) 1.3 core spec
- Implemented Rails API endpoints, schema models and migrations, and unit tests
- Refactored existing tasks and helpers to achieve data and functional requirements
- Communicated with Java Spring Boot app, added supplemental behaviors and tests

### Assessment Data Transfer

**Challenge:** Reduce company expenses by migrating student assessment data away from deprecated system

- Researched multiple API specs for data creation, fetching, configuration

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- Designed internal file formatting and usage for new assessment types
- Roped in UX, product, and accessibility teams for a culmination of stakeholders
- Explored React.js component lifecycle behaviors and DOM manipulation
- Carried out the scripted migration of production data
- Documented capabilities, functionality, and restrictions

## Harmony Minimum Viable Product

**Challenge:** Create a transformative educational product that removes predictors of academic success, starting from an existing system

- Defined new relational data requirements and restrictions
- Identified opportunities for improvement in model designs
- Organized discussions to address challenging data requirements

## Course Development Role

**Challenge:** Deliver open education resources improvements by assisting in the creation and adaptation of Lumen courseware

- Learned and wrote mathematical equations in Latex
- Formatted 500+ HTML tables with embedded CSS & HTML

## PROJECTS

### Android Mobile Application: *Kotlin*

*Education*

**Challenge:** Create an app that utilizes ViewModel architecture, Android activity lifecycle, Jetpack navigation, device storage, implicit intents, and APIs with a pleasant and intuitive UI

### Tree Search Algorithms: *C++*

*Education*

**Challenge:** Implement BFS, DFS, IDDFS, and A\* tree search algorithms to solve the Wolves and Chickens puzzle game, determining an admissible heuristic function for the A\* search

### Naive Bayes Classifier: *C++*

*Education*

**Challenge:** Design a program which determines the positive or negative connotation of user reviews given training and test data sets, and achieves over 95% accuracy

### Tkinter GUI: *Python*

*Personal*

**Challenge:** Develop a user-facing application that processes expense files, categorizes the transactions, and functionally supports their management and graphical visualization

### Microcontroller Programming: *AVR Assembly*

*Education*

**Challenge:** Program an Atmel Atmega32 Microcontroller to simulate a robot with two bidirectional motors that supports speeding up, slowing down, turning, and reversing

## COMMUNITY INVOLVEMENT

### Phi Kappa Psi Oregon Beta Chapter

30+ hours of community service/year, Kitchen Manager, Community Service Chairman