



## PROFILE

Starting with complex conditionals in Excel for my greenhouse businesses, to writing my first 'Hello World' program I knew I would flourish in software development. I discovered how thinking through every step, using logic and problem-solving skills within a set of guidelines fits my personality. I actively engage the power of technology in perusing analytical challenges to develop innovative and optimized solutions.

# ETHAN JOHNSRUD

## SOFTWARE DEVELOPER

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## TECHNOLOGIES

- ◆ Agile Scrum
- ◆ GitHub
- ◆ Linux
- ◆ React & Hooks
- ◆ JavaScript
- ◆ HTML
- ◆ CSS
- ◆ NodeJS
- ◆ Flutter
- ◆ Dart
- ◆ C++
- ◆ Java & JavaFX
- ◆ Bootstrap
- ◆ Socket.IO
- ◆ Photoshop
- ◆ Illustrator

## AWARDS

- ◆ Eagle Rank – BSA
- ◆ FIRST Robotics State Competitors
- ◆ CS Department Scholarship
- ◆ National Honor Society
- ◆ UMD Dean's List

## EXPERIENCE

### Concept Environment

[325 Hours]

Fasetto Project: A collaborative place where ideas can be developed and explored. Multiple users are can join different sessions and create a mind tree. Starting with an original idea, users can expand and grow with more detailed concepts. Innovated full networked system of server identifying users in separate rooms, live syncing, and offline data management conflict merging. Integrated into proprietary Gravity OS for device sharing.

- ◆ React JS
- ◆ Socket.IO
- ◆ Express
- ◆ HTML
- ◆ JavaScript
- ◆ CSS

### UMD Alive

[100 Hours]

University Project: Worked as a part of an Agile Scrum Team in implementing user stories for a school club management android application. Conducted daily sprint meetings, GitHub version syncing, and server support. Our team's core features include school Google authentication login, club event postings, and inter club messaging.

- ◆ Agile Scrum
- ◆ GitHub
- ◆ Android Studio
- ◆ Java

### What to Eat?

[350 Hours]

Meal Planning through machine learning and cost optimization. All in one application creating menus that fulfill food categories to shopping list with price and serving size tracking. Developed efficient item lookup and references mapping to elevate resource management. Designed complex sorting and value analyzing algorithms to achieve relevant recommendations and user experience.

- ◆ Flutter
- ◆ Adobe Illustrator
- ◆ Dart
- ◆ Adobe Photoshop

### Pac-Man Game

[150 Hours]

Implemented the classic Pac-Man game incorporating complex conditionals for game modes, difficulties, and command hierocracies. Developed an AI algorithm and that could have multiple instantiations while operating independently. Handled logic exceptions of game play especially in path-finding challenges.

- ◆ C++
- ◆ AI Calculations and Analysis
- ◆ Logic & Syntax Exception Handling

## Internship

**Software Developer, Fasetto:** Oct. 2019 – May 2020

Through this internship experience, I gained valuable insight into the inter-workings of a tech company and the daily duties of software engineers. I became familiar with the development lifecycle, with frequent Q&A testing, software demos, and product sales process.

Navigated the full software lifecycle in developing **Concept Environment**:

- 1) Brainstorming Ideas
- 2) Mock Prototypes
- 3) Feature Development
- 4) Client User Interface
- 5) Backend Server Organization
- 6) Market Research
- 7) Version Control Management
- 8) Marketing
- 9) Production Release
- 10) Deployment

## EDUCATION

**University of Minnesota Duluth**

B.S. Computer Science => ABET accredited: CAC

Minor: Business Finance

Security: Encryption && Vulnerabilities | NLP: Machine Learning | Algorithm Optimization Networks: Internet Protocols | Design: Adobe && Design Principles  
Development: Object Oriented Design && Agile Scrum