

# JOHN W HODSON

✉ hodsonus@gmail.com

🏠 <https://www.hodsonus.com>

📞 hodsonus

☎ (727) 348-2899

## EDUCATION

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**University of Florida, Gainesville, FL** **GPA: 3.95/4.0** **August 2016 to May 2020**

- *Bachelor of Science in Computer Engineering*
- Coursework - Algorithm Design, Programming Language Concepts, Object Oriented Programming, Data Structures & Algorithms, Principles of Computer System Design, Information and Database Systems
- Honors - CISE Scholarship, ECE Scholarship (x2), College of Engineering Scholarship for Engineering Leadership, Bright Futures Florida Academic Scholar (100% tuition coverage), College of Engineering Dean's List (Spring 2018, Spring 2019), Anderson Scholar (top 1% academically in class of 2020)

## EXPERIENCE

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**Microsoft, Redmond, WA** **May 2019 to August 2019**

*Software Engineer Intern*

- Developed in the C# and .NET environment on Azure's Active Directory, a cloud-based service responsible for managing user identities, access management, and devices.
- Solved a major customer complaint regarding the loss of private BitLocker key data by refactoring API calls and architecting an additional external storage model to decouple the lifetime of two data objects.
- Changed the intrinsic way that the Microsoft Mezzo storage service operates by altering their data synchronization service to sync data objects with a one-to-many instead of a one-to-one relationship.

**Ultimate Software, Weston, FL** **May 2018 to August 2018**

*Software Engineer - TechStar Intern*

- Developed and tested in C# within the ASP.NET framework in a Kanban-Agile environment on UTE (UltiPro Tax Engine), responsible for the collection and payment of over 13,000 tax codes.
- Managed and manipulated UTE's T-SQL database with the use of Microsoft SQL Server.
- Implemented Grafana dashboard to diagnose performance issues with generation and calculation of tax forms in order to better meet SLAs.

**Google igniteCS, Gainesville, FL** **January 2017 to May 2018**

*Program Lead (formerly Logistics Director)*

- Communicated directly with Google and make key decisions on critical aspects of the program.
- Managed scheduling between Oak View Middle School and our Google igniteCS team of over 30 mentors.
- Aided students in a class of ~20 working with VEX iQ Robotics, providing guidance in basic programming principles and hardware implementation as a mentor.

**Association of Computer Engineers (ACE), Gainesville, FL** **January 2018 to January 2019**

*External Outreach Chair*

- Planned and implemented biweekly outreach events for a club with a reach of nearly 1000 members.
- One of 11 leaders responsible for the management/growth of ACE via decision making on key issues.
- Participant in career development mentorship pairing program as an active member.

## PROJECTS

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**C-Like Language to LLVM Compiler** Gainesville, FL **April 2019 to May 2019**

- Built a compiler in OCaml for GNU bc, the popular Unix calculator language, using the LR(1) parser generator Menhir and OCaml's LLVM library to generate LLVM IR code.
- Includes functions, if/else statements, and while/for loops - all structured in an abstract syntax tree.

## TECHNICAL SKILLS AND INTERESTS

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**Back-End Lang.**

C#, Java, Python, SQL, C++

**Miscellaneous Lang.**

OCaml, ANTLR, MATLAB, C, VHDL, Assembly (AVR, MIPS, ARM)

**Tools & Frameworks**

Git, .NET

**Certifications**

Machine Learning (Andrew Ng on Coursera), MongoDB Basics

**Interests**

Spearfishing, Physical Fitness, Compilers