JOHN W HODSON

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EDUCATION

University of Florida, Gainesville, FL　　　　**GPA: 3.96/4.0**　　　　**August 2016 to May 2020**
Bachelor of Science in Computer Engineering
- Coursework - Algorithm Design, Object Oriented Programming, Computer System Design, Operating Systems, Microprocessor Applications II (RTOS), Programming Language Concepts, Database Systems
- Honors - Computer E Award (most prestigious academic award granted by ECE department), Anderson Scholar (top 1% academically, class of 2020), College of Engineering Scholarship for Engineering Leadership, CISE Scholarship, ECE Scholarship (x2), College of Engineering Dean's List (x4)

EXPERIENCE

Microsoft, Redmond, WA　　　　　　　　　　　　　　　　**May 2019 to August 2019**
Software Engineer Intern
- Developed using C# and .NET on Azure 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 cache service operated by altering their data syncing 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 Intern
- Developed and tested using C# and ASP.NET on UTE (UltiPro Tax Engine), an internal tax filing service responsible for the collection of over 13,000 tax codes.
- Implemented Grafana dashboard to diagnose performance issues with generation and calculation of tax forms in order to better serve users.

VOLUNTEER EXPERIENCE

Google igniteCS, Gainesville, FL　　　　　　　　　　　　**January 2017 to May 2018**
Program Lead (formerly Logistics Director)
- Led an educational initiative with the goal of educating students in basic programming principles.
- Communicated directly with Google to design the initiative's Computer Science curiculuum.
- Managed scheduling between Oak View Middle School and our Google igniteCS team of over 30 mentors.

PROJECTS

Firespotter, Gainesville, FL　　　　　　　　　　　　　　**August 2019 to May 2020**
- Built a web application in Django that utilizes deep learning to detect wildfires in an array of images provided by low-cost internet protocol cameras to aid in the fight against wildfires.
- Designed a neural network architecture in PyTorch that achieved a 94.5% accuracy rating.

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

Architecture & Systems	Web Development, RESTful APIs, Microservices, Embedded Systems
Languages	C#, Python, Java, C, Assembly (AVR, ARM), OCaml, C++
Frameworks & Tools	.NET, Django, Hugo, PyTorch, Bash, Git
Data Management	Microsoft SQL Server, MongoDB
Containers & Cloud	Docker, Azure