

Tyler Jaacks

Software Engineer Intern



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Skills

- Swift
- Python
- Java
- C#
- .NET
- Groovy
- Objective C
- C
- C++
- ARM Assembly
- x86-64 Assembly
- SQL
- AWS API Gateway
- AWS Lambda Functions
- AWS S3
- AWS DynamoDB
- AWS API Gateway
- AWS Step Functions
- AWS SNS
- AWS Neptune
- Windows Server 2012 R2
- Windows Deployment Services
- Active Directory
- Group Policy
- LaTeX
- Avro
- RDF
- Physics
- iOS Development
- Apache Jena
- OWL.SPARQL
- UML

Education

2016-2023 B.Sc.
Computer Science and Physics

Iowa State University

Experience

2017 - 2020 Maverick Software Consulting
Software Engineer Intern

Ames, IA

- Contractor for Thomson Reuters. Formerly a contractor for Refinitiv.
- Lead and participated in code reviews for the team.
- Migrated several tests from our old test suite to our new test suite (Java).
- Worked on a backend service (Java) for retrieving records from a database and storing the data in the Avro file format for distribution.
- Developed a tool for SHACL validation of RDF files to verify integrity of data (Java).
- Developed a Web API for versioning RDF files using AWS API Gateway and AWS Lambda Functions (Java).
- Developed a mock Web API for end-to-end testing of our internal Web APIs.

Projects

- TOFMS-GG-Group - Doing undergraduate research in computation chemistry developing a data analysis and instrument software package to automate the data analysis of time of flight mass spectrometry data. Ported old data analysis code to Python and currently porting the Monte Carlo simulation code to C++ so that I can use the OpenCL to run the simulations on the GPU.
- XBONEmu - Working on developing the worlds very first Xbox One "emulator". Currently in the research and development phase of the emulator.
- Clockwork-Bot - A Discord bot that detects the post of a TikTok link and downloads the the mp4 video and posts the link in the chat.
- HackISU Spring 2018 - Developed a tool to detect plagiarism of source code using the Levenshtein Distance and Smith-Waterman Algorithm.
- M2I - Lead a team of engineers to build a new streamlined process for composite box design, developed tools for flight tracking and prediction, designed an efficient architecture for storing flight data, tracking high altitude balloons, and predicting flights, and converted flight prediction and tracking software, from Java to Python.
- PyState - Reverse engineered the MyState app, creating a simple Python API for using the ISU Dinning, ISU Laundry, and CyRide data, in any Python app.
- ARKitGame - A simple game taking advantage of the new iOS 11 augmented reality framework ARKit.
- Digital Women Hackathon Spring 2017 - Developed a Guitar Hero clone using Unity3D and C# called Guitar Heroine.
- HackISU 2016 - Developed a game using Unity3D and C# named Harambe Simulator.

Awards

2015 Eagle Scout Troop 259

Professional Organizations

2016 Association for Computing Machinery Student Member
2019 American Physical Society