

# Lukas Herman

## Full Stack Developer

Passionate about coding. Enjoy being a full stack developer and learning new things every day. Expert in Go, Python, Javascript, Linux, and Docker.

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## Work Experience

### Software Development Engineer

#### AWS - Kinesis Video Streams SDK

04/2020 - Present

Seattle, WA

- Enabled IPv6 for WebRTC C SDK
- Created a File Uploader Example with Producer C++ SDK
- Enhanced Build System for SDKs to be Easier to Install
- Reduced test flakiness for SDKs
- Added mbedTLS support to WebRTC C SDK to support devices with RTOS
- Created WebRTC C SDK end-to-end testing architecture

### Software Development Engineer

#### AWS - Amazon Meetings

08/2019 - 04/2020

Seattle, WA

- Enabled Private Meeting creation
- Added time travel room availability explorer
- Integrated live streaming event creation
- Added multiple rooms reservation for a meeting to chatbot
- Mitigated, investigated, analyzed, documented, and suggested a more robust architecture solution
- Migrated architecture in 5 AWS regions to support TLS 1.2

### Software Developer: Platforms Blockchain

#### IBM - FoodTrust Blockchain Team

08/2018 - 08/2019

Remote Job

- Created IBM FoodTrust dashboard for clients to manage their partnership
- Created an Angular end-to-end testing framework with Protractor and Jasmine; the foundation for testing development
- POC, developer, and maintainer for the end-to-end testing framework. Integrated into Jenkins/Kubernetes build pipeline

### Full Stack Developer Intern

#### IBM - FoodTrust Blockchain Team

05/2018 - 08/2018

Littleton, MA

- Wrote script to convert codebase, from Angular's i18n to ngx-translate, adding 7,553 lines and removing 2,477, leveraged advanced Regex, NLP, and locality analysis
- Fixed 2 existing issues regarding resizing customer charts
- Developed a highly customizable report generator web app for managing multiple Github repos with asynchronous programming
- Made 286 contributions within 3 months

### Software Developer Research Intern

#### Clemson Computing & Information Technology

05/2017 - 02/2018

Clemson, SC

- Used Tensorflow to generate 3D images from 2D rock images
- Led 2 graduate students to build and deploy Open EdX
- Developed software in a Docker container make Incremental Backups with Pull Backup approach from an arbitrary host
- Created Python wrapper for MongoDB queries
- Collaborated to write a network simulator

## Skills

Go

Python

Javascript

C/C++

Linux

Docker

Bash

Git

CSS

Java

HTML

## Languages

English

Indonesian

## Relevant Experience

#### WebRTC MediaDevices in Go

11/2019 - Present

<https://github.com/pion/mediadevices>

- is an interface to obtain access to hardware, and provide peer-to-peer data transfer through Pion WebRTC
- Original author of Pion WebRTC MediaDevices
- Designed abstractions for drivers and codecs
- Supports multiple platforms and major codecs, such as libopenh264, libx264, and libopus

#### Free Clinic Telemedicine Web App

01/2020 - Present

- is volunteer project for doctors to video call translators
- Created a signaling protocol with Firebase
- Designed and implemented state management, authentication flow, send/receive messages, and peer-to-peer video call with WebRTC

#### Live Share mDNS

03/2019 - 05/2019

<https://github.com/lherman-cs/vs-live-share-mdns>

- is a Visual Studio Code extension that lets users share their LiveShare collaboration sessions
- POC, developer, and maintainer for the project that has ~2,400 installs
- Implemented local peer discovery with mDNS
- Created a publish/discover protocol for connecting peers

#### Liar Dice Online

01/2019 - 05/2019

<https://github.com/lherman-cs/cs4160>

- Implemented a game engine with SDL2, Promise-based async task scheduler, async TCP library, and page routing system in C++
- Wrote server in Go with lobby system, peer discovery, bots, and network disconnection recovery features
- Ported the project from C++ to WASM and created a CI/CD pipeline for WASM deployment
- Designed key and value message protocol

#### Smart Reminder - Hackathon 1st Place Winner

03/2018

<https://github.com/lherman-cs/smart-reminder>

- is a fully automated AI break reminder that intelligently turns notifications on/off by detecting if user is sitting
- Best Overall Hack in College Hackathon of 100 participants
- Led hardware and software teams of 2 people each
- Wrote RESTful API, web UI, deep learning app for object detection, and debugged the hardware team's code

## Education

### Bachelor of Science in Computer Science

#### Clemson University

01/2017 - 05/2019

3.95/4.0