



Keller Lawson

Justin Harris

Parker Weisel

# Who are we?

[Home](#)[Order Now](#)[Tracking](#)[About](#)[Sign In](#)

## About the Team



**Keller Lawson**

Computer Science, Sr.  
Team Lead

Keller Lawson is a graduating Senior in the Computer Science program at the University of Idaho. His responsibilities including setting up Amazon Web Services (AWS) deployment, creating the MQTT secure communication channel and RESTful API, and coordinating work with the other students working on the mini-factory.



**Justin Harris**

Computer Science, Sr.  
Developer

Justin Harris is a graduating Senior in the Computer Science program at the University of Idaho. One of his main responsibilities in this project was the set up and management of the MySQL database with a backend RESTful API utilizing the Express Framework for communication to the frontend.



**Parker Weisel**

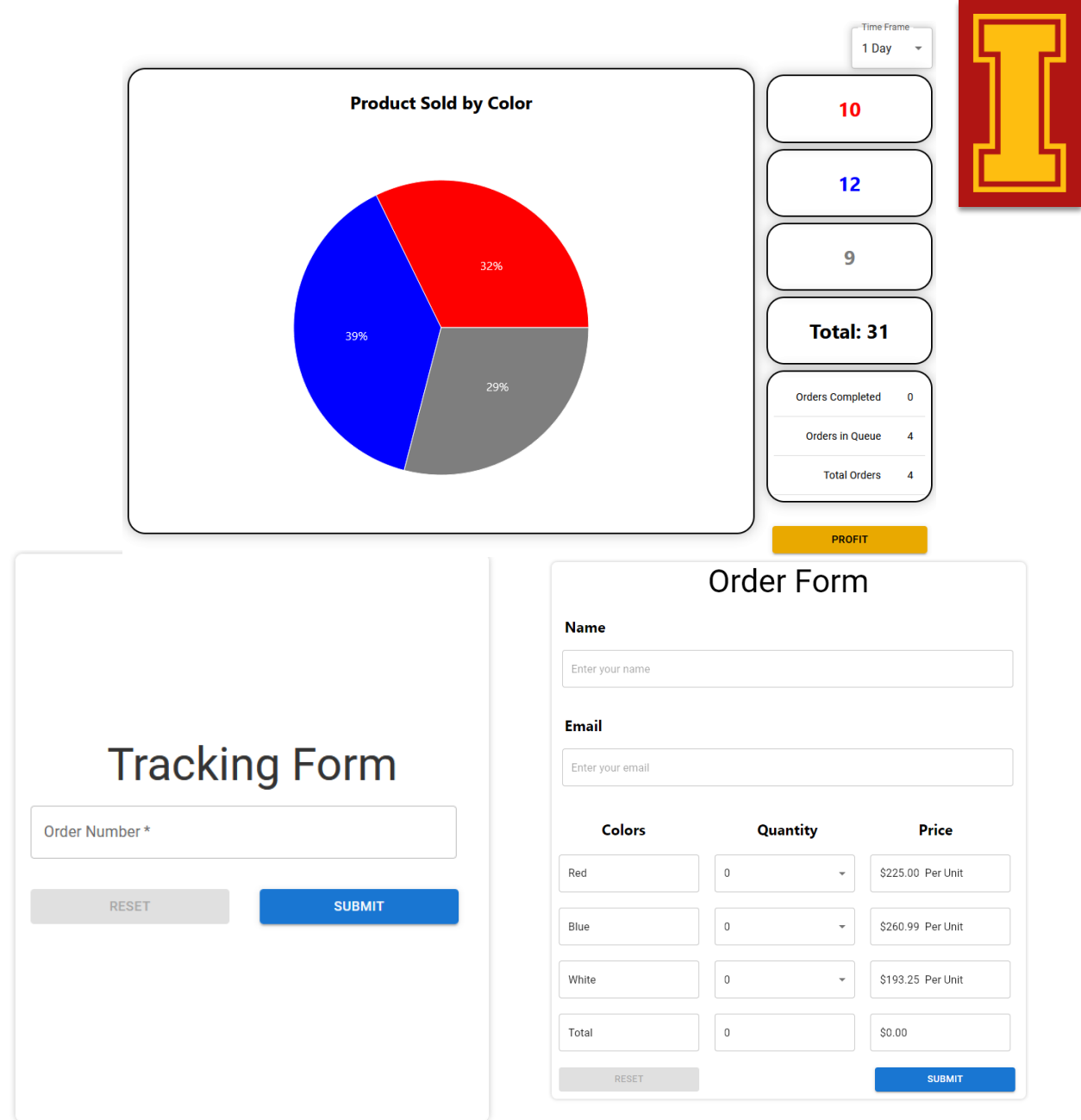
Computer Science, Sr.  
Developer

Parker Weisel is a senior in the Computer Science program at the University of Idaho. His main responsibilities were handling the management pages and graphs using MySQL Queries, as well as the login and home pages.

# What is OnlyFactories?



# OnlyFactories Webpage



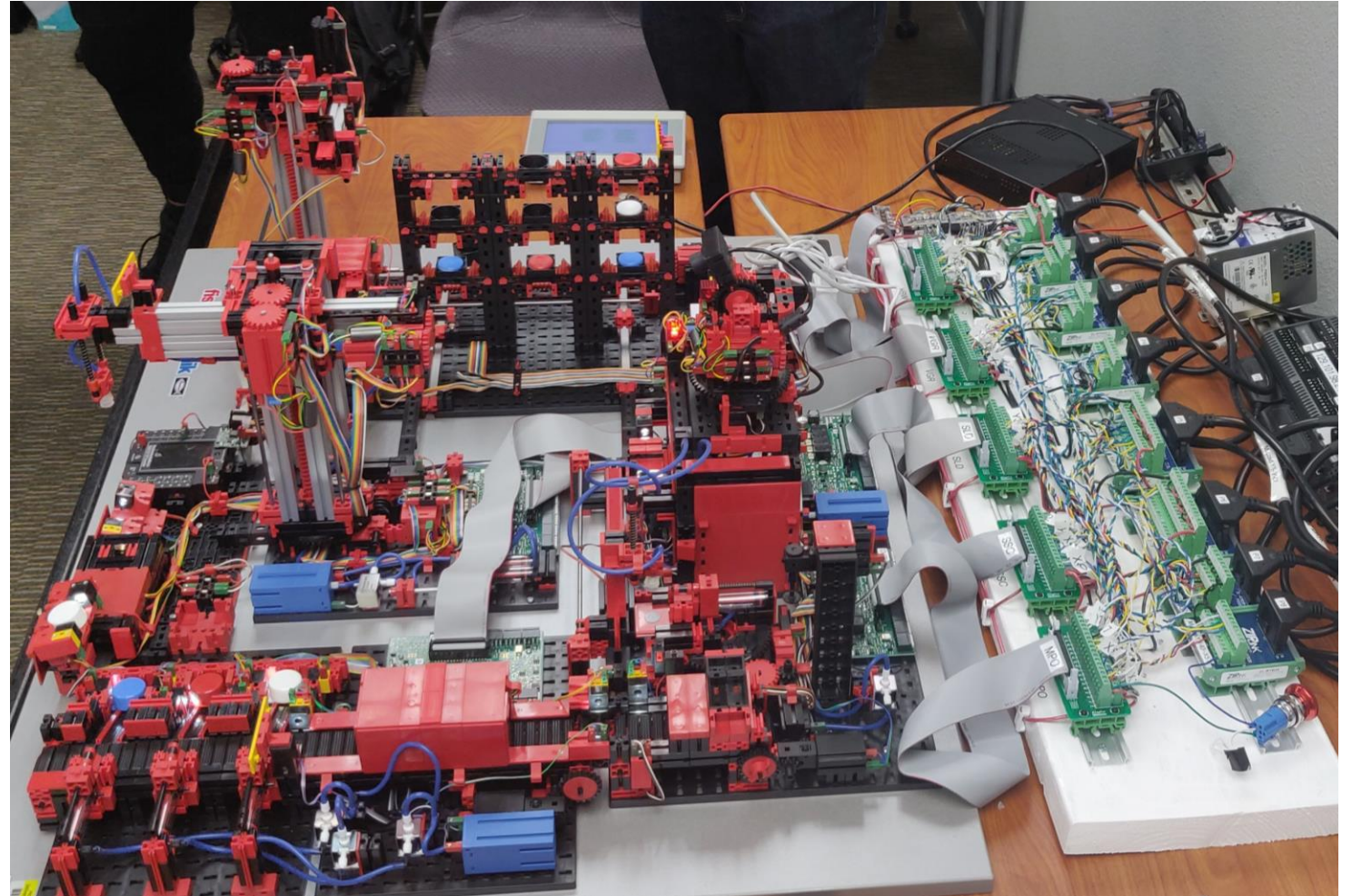
# Factory Orchestrator



- ▶ Worked closely with Liaisons to develop a communication channel.
  - ▶ Middleware API:
    - ▶ Processes orders to the factory
    - ▶ Provides status updates to the Web App



# Mini Factory



# OnlyFactories Features



Create orders



Live Order Tracking



Monitor order data

# Customer Requirements



Hosted 100% in the cloud



Modern Web Framework



Live Order Tracking



# Demo Video

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## Welcome to OnlyFactories

Make orders and track them.

This is a senior capstone project from the University of Idaho and allows customers to order red, blue, and white disks from a Fischer-Technik Factory located in Couer d'Alene, Idaho.

To start, make an order by clicking on Order. If you have already ordered something and would like to track it, click Track.

[ORDER](#)[TRACK](#)

# Conceptual Development



# Development Issues



LOCKED OUT OF FIRST  
EC2 VIRTUAL MACHINE.



API REQUESTS ONLY  
WORKED ON MICROSOFT  
EDGE BROWSER.

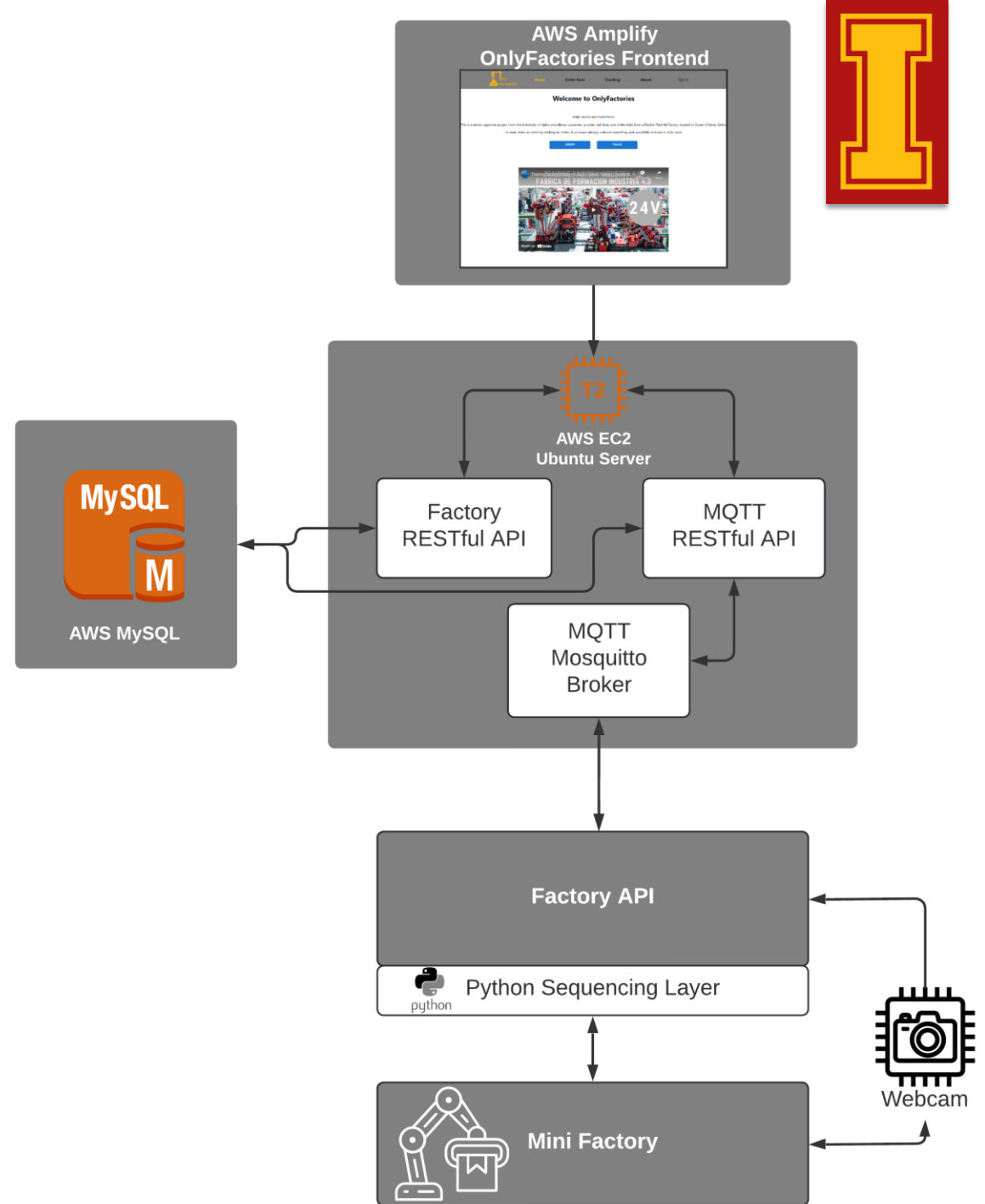


SWITCHED DATABASE  
FROM DYNAMODB  
TO MYSQL.

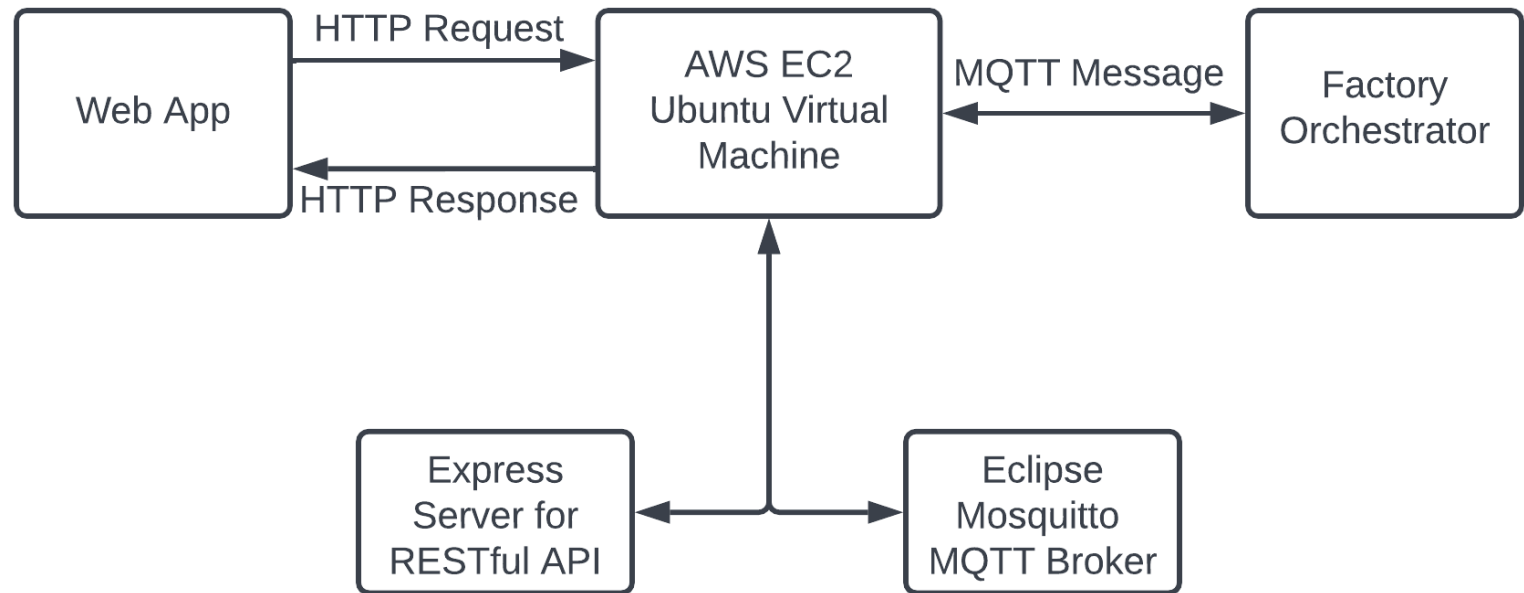


SERVER CERTIFICATE DID  
NOT VALIDATE.

# Final Design



# Server Communication



# Total Available Market

- ▶ 2019 – Estimated 10 million factories worldwide
- ▶ 2022 – Over 638,000 manufacturing businesses in the US
- ▶ Significant potential market for OnlyFactories and Factory 4.0 architecture
- ▶ 3 channels of revenue
  - ▶ Software licensing
  - ▶ Customization
  - ▶ Recurring support



# Future Development



Mobile App



Mobile Web View



Browser compatibility



Aesthetics (graphics, dark mode, etc.)



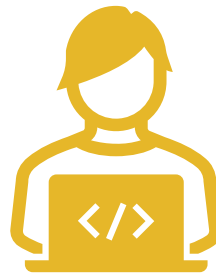
Support Additional Factories



# OnlyFactories Successes



Satisfied all client  
requirements



Codebase designed  
around expandability



Constructed live  
webcam feed

# Conclusion



- ▶ Completely control a factory from the cloud
- ▶ Developed an app that could form a business
- ▶ Website available at [OnlyFactoriesCDA.com](http://OnlyFactoriesCDA.com)



Questions?