John Holler

Product Engineer

Personal Info

email

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telephone

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website

johnholler.com

github

github.com/johnholl

Skills

Frontend

React · React Native · Redux · Functional Components · HTML · CSS

Backend

Express · Websockets · Django · Flask · MongoDB · MySQL · Firebase

Machine Learning

TensorFlow · Neural Networks · Reinforcement Learning · Game Theory · Computer Vision

Programming Languages

Javascript > Python > Java > C > C++

Primary System

Linux

Other Skills

Teaching · Public Speaking · Reading Technical Papers · Quickly Learning New Tech

Key Projects

Unstuck Scheduling

explore

beunstuck.net

repositories

https://github.com/johnholl/unstuck-dashboard
https://github.com/johnholl/unstuck-booking
https://github.com/johnholl/unstuck-backend

Summary

Unstuck is a platform I built from the ground up as a solo developer. The platform allows tutors and content creators to advertise availability for virtual one-on-one appointments (over Google Meet). Users post a link to their booking site, and customers can select an appointment type, time, and provide some details and payment information. Users are notified with automated emails, and Unstuck automatically creates a shared Google Calendar event with a Google Meet link. Unstuck's front end consists of two React Projects - one for the authenticated user side and one for the customer booking side, as well as a Wordpress landing site. It also utilizes JavaScript in the backend via Firebase functions.

Tech Stack

- React / JavaScript
- Firebase
- CSS and Antd design

Skills learned

- Google APIs integration
- Ecommerce (Stripe) integration

Mayan Power and Light (MPL) Sales App

read more

https://johnholler.com/2021/03/03/sales-app-for-mayan-power-and-light/

repositories

https://github.com/johnholl/MPL

Summary

The Appropriate Technology Collaborative (ATC) is a nonprofit doing work in the renewable energy sector in Michigan and Guatemala. MPL is a program in Guatemala that trains and supports entrepreneurs selling solar panel kits. The Sales App I wrote for them allows their entrepreneurs to keep track of sales, confirm payment, and share data with ATC. The app has both English and Spanish support, and is designed for use in situations with limited internet access.

Tech Stack

- React Native / Expo / JavaScript
- Firebase
- React Native Paper

Skills learned

- Working with clients
- Redux

DiDi Taxi Routing Agent and Simulator

white paper

https://ieeexplore.ieee.org/document/8970873

repository

https://github.com/johnholl/Didi_dispatch

Summary

Didi Taxi is a large rideshare company based in China. In large cities their driver assignment algorithm must make multiple decisions every second. When I joined, Didi was in the process of transitioning from a heuristic assignment method to using Reinforcement learning. I implemented several reinforcement learning algorithms on their dataset, including Q-learning and TD-lambda. I also designed an efficient simulator using historical data that we used as a training playground for neural network-based algorithms.

Tech Stack

- Python
- Tensorflow
- Pandas / numpy
- Seaborn / Matplotlib

Skills learned

- Designing, implementing, training, and debugging neural networks
- Computer vision
- Reinforcement learning

Other Projects

Ola Filter Impact Map

An interactive mapping tool built for an affordable water filter startup. Explore at ola.johnholler.com.

Ping Pong Scoreboard

A wireless scoreboard built around ESP8266 chips, a Raspberry Pi, and Express websockets.

Robotic path planner

An interactive path planning tool using cubic splines built for the Greenhills Robotics team. Explore at robotics.johnholler.com.

Personal Website

A wordpress site hosted on DigitalOcean and served using Nginx. Explore at johnholler.com.

MemoryMap

A map-based audio scavenger hunt created with React Native.

MyPantry

A tool for keeping track of purchased groceries. It utilizes a selenium web scraper, a Django backend and React frontend.