

LUKE COOK

Software Engineer

@ invocatis@gmail.com

☎ (607) 220-4047

📍 Aurora, New York

in linkedin.com/in/invocatis

🔗 github.com/invocatis

EXPERIENCE

Software Engineer Contractor

Hyperfiddle

📅 March 2020 - September 2020

📍 Remote

- Full Stack Clojure(script), Datomic CRUD application framework
- Setup CI/CD pipeline using CircleCI and AWS ECR and ECS, configured in Terraform
- Formalized an extensible algebra for Datomic statements
- Research and Development:
 - Reactive streams for rendering in Clojurescript
 - More ergonomic, and idiomatic category theory based programming in Clojure
 - i Pattern Matching algorithms

Clojure Clojurescript Datomic Reactive Streams Haxe
AWS ECS Docker CircleCI Terraform

Application Programmer II

Cornell University

📅 June 2019 - June 2020

📍 Ithaca, New York

- Backend of Genomic Data ETL application
- Created CSV file digest framework
 - Data is streamed from file to PostgreSQL Database
 - JSON file declares how table rows are gotten from file
- Developed a framework for automated system testing; focused on composability, ease of use, and self-cleanup
 - Developed domain-specific scripting language to simplify semantic layer of test suite in 3 layers: Arrange/Act, Assert, and Cleanup
 - Was implemented in 3 layers: A framework backend (written in Clojure), a business logic middle layer (Written in Java), and a testing logic script suite (Written in syntax defined by backend framework)
 - Cleanup ensured automatic test independence and idempotency
 - Produced JUnit results for integration with Bamboo CI/CD Pipeline

Java Bamboo Clojure Bash Docker PostgreSQL
Object-Oriented Design Layered Architecture

Software Engineer Coop

Intuit

📅 January 2018 - July 2018

📍 Mountain View, California

- Back end of Account Signup Springboot Application
- Wrote a Java API for document upload, indexing documents in SQL Database and storing in AWS S3

Java Oracle SQL Amazon S3 Springboot REST OOP
Agile Slack API CFG Clojure

EDUCATION

Bachelor's of Computer Science

Rochester Institute of Technology

📅 2017

📍 Rochester, New York

LANGUAGES

Clojure(script)

Java

Haskell



TECHNICAL SKILLS

SQL MongoDB Bamboo CircleCI
AWS Datomic Git Docker
Context-Free Grammar Regex Bash

PROJECTS

retort

State Managment for Hiccup

🔗 github.com/invocatis/retort

- CSS-like DSL for Reagent state dependencies
- Allows separation of view and state code; no atoms in view code
- Optimized to work with Reagent.

eldritch

Algebraic Data Types & Pattern Matching

🔗 github.com/invocatis/eldritch

- Create algebraic data types using the 'data' macro; extend types with Java interfaces and Clojure protocols
- Pattern matching creates efficient compile time and runtime matching algorithms.
- define macro allows pattern matching to be used in function definitions; creates multimethod-like polymorphism.

motif

Recursive Pattern Matching in Clojure

🔗 github.com/invocatis/motif

- Comprehensive, clean DSL for matching features of recursive, mixed data structures
- Patterns are data: Clojure collections and functions compose into patterns