

Carl J. Factora

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Experience

Software Developer

New York, NY

Droit Financial Technologies, LLC

Aug 2017-Jul 2019

- Led development and maintenance of core company products in 3 engineering teams:
 - Adept team: decision engine API; managed client releases, issues and feature requests
 - DSDS team: a ground-up redesign of Adept, allowing for more nuanced and flexible queries
 - ATL team: formalizing internal data transformation
- Designed a low-latency decision engine API, *Adept*, used for financial regulation compliance:
 - Leveraged Clojure to design a REST and Java library interface
 - Refactored core decision engine data pipeline to reduce response latency by over 40%
 - Developed/created “Gnarly”, a Turing-complete language based on Groovy
 - Developed/created “Geni”, a predicate language based on first-order logic
- Formalized working practices and processes, including:
 - Project management: introduced agile/scrum practices for managing developer tasks and deliveries
 - Technical interview processes: implemented a pair-programming portion for exercising collaboration skills
 - Workflows around releases, collaboration, and code review

Associate Instructor

Bloomington, IN

Indiana University

Aug 2016-Dec 2016

Lectured on advanced functional programming concepts and design techniques in Haskell.

Projects

Project Lamp

Interactive Online Book

- Authored an online interactive book for teaching functional programming concepts
- Leveraged a static-site generator (Jekyll) for seamless creation of book content

Essentials of Compilation: An Incremental Approach

Compiler Design Textbook

- Contributed to an open source compiler textbook by Jeremy Siek
- Used for university course material in CSCI-P423/B523.

Education

The Recurse Center

New York, NY

Hacker School

February 2017–May 2017

Attended a self-directed programming retreat. Learned web development techniques, pair programming practices, and contributed to open source projects.

Indiana University

Bloomington, IN

Computer Science/English Literature, GPA 3.42

Aug 2012–May 2016

- Instructed graduate and undergraduate CS courses
- Undergraduate CS research experience under Daniel P. Friedman

Proficiencies

Clojure, Racket/Scheme, Haskell, Elm, PureScript, Agda, Java