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