# Carl J. Factora

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## **Education**

Indiana University Bloomington, IN

Computer Science/English Literature, GPA 3.42

2012–2016

Coursework includes Compiler Design, functional programming, data structures, undergraduate research and graduate level studies in Homotopy Type Theory and Probabilistic Programming.

The Recurse Center NYC

New York, NY

Hacker School

2017-Current

Attended during batch Spring 1, 2017. Learned web development practices and concepts, contributed to open source projects, and created *Project Lamp* (descibed below).

## **Experience**

**Associate Instructor** 

Bloomington, IN

Chung-chieh "Ken" Shan

Aug 2016-Dec 2016

Assisted in Indiana University's CSCI-B490 "Advanced Functional Programming". Covered concepts of functional programming and programming techniques in Haskell.

**Undergraduate Instructor** 

Bloomington, IN

Indiana University

Jan 2014-May 2016

Instructor for the following Indiana University undergrad and graduate courses:

- o CSCI-P423/B523; Compiler Implementation
- o CSCI-C311/B532; Programming Language Concepts
- o CSCI-C211; Introduction to Computer Science

#### **Undergraduate Researcher**

Bloomington, IN

Daniel P. Friedman

May 2015-Jul 2015

Conducted research with Daniel P. Friedman on Martin-Löf Type Theory and dependent types. Influenced future course material for CSCI-C311 and resulted in a paper and a talk.

## Papers, Talks and Projects.....

**Project Lamp** 

New York, NY

Interactive Online Book

Feb 2017-Current

Author and co-creator of an online interactive book teaching functional programming in PureScript.

Essentials of Compilation: An Incremental Approach

Bloomington, IN

Compiler Design Textbook

Oct 2015-May 2016

Contributed to a compiler textbook by Jeremy Siek used for course material in CSCI-P423/B523.

#### Introduction to Dependent Types

Bloomington, IN

Indiana University Logic Seminar

Oct 2015

Presented at Indiana University's Logic Seminar on dependent types and the Calculus of Constructions.

# **Proficiencies**

Haskell, Agda, Elm, PureScript, Racket/Scheme, Python, C, Java