

Ambrose Bonnaire-Sergeant Last update on September 20, 2017

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Summary

Programming language tooling developer, bringing academia to the masses.

I love delivering tools and lessons from academia to working programmers. My work in building optional type systems has been incredibly rewarding, and fulfills a need of mine to make a real impact on other people's lives.

My work on Typed Clojure is indicative of my approach. I created the optional type system for Clojure in 2011. Each subsequent year has taken a new direction based on the feedback of the community, using my expertise to match solutions to problems.

I love the communicating and marketing ideas. It is both rewarding and challenging. I have orchestrated crowdfunding campaigns that have collectively raised over \$50,000 to support my goals in open source development—supported by companies like Cognitect, Walmart Labs, Prismatic, and CircleCI.

I have given many talks in industry and academic conferences, including Strangeloop, Clojure Conj, Philly ETE, Lambda Jam Brisbane, Code Mesh, ESOP, and the International Lisp Conference. I also enjoy talking at local Clojure user groups.

Experience

Research Assistant

Advisor: Sam Tobin-Hochstadt

We have worked to formalise and publish a paper on the fundamentals of Typed Clojure. We are also working towards extending Typed Clojure with gradual typing. More recently, we are developing a framework to infer type annotations for optional type systems based on [runtime instrumentation](#).

INDIANA UNIVERSITY BLOOMINGTON

Fall 2014 — Summer 2015, Spring 2016

Assistant Instructor

Instructors: Sam Tobin-Hochstadt, Suzanne Menzel

Taught undergraduates C211, an introductory programming language course based on How To Design Programs. Also C343, introductory data structures. Conducted labs and office hours.

INDIANA UNIVERSITY BLOOMINGTON

Fall 2015, Fall 2016 —

Google Summer of Code

Student

2012, 2013

Mentor

2014 (3 students), 2015 (2 students)

Administrator

2014, 2015

Crowdfunded Open Source work

PERTH, WESTERN AUSTRALIA

Typed Clojure

2013

Gradual Typing for Clojure

2015

Automatic Annotations for Typed Clojure and clojure.spec

2016

Analyst Programmer

UNIVERSITY OF WESTERN AUSTRALIA 2010 — 2011

I worked with the UWA library staff to gather information on the format and location of various University research data sources, and set up VIVO semantic web software. I used Java, XSLT, and bash, and administered several Linux machines.

Education

[Indiana University Bloomington](#)

BLOOMINGTON, INDIANA

Computer Science PhD student (In progress)

Fall 2014 —

[Indiana University Bloomington](#)

BLOOMINGTON, INDIANA

Master of Science in Computer Science

2014 — 2017

[University of Western Australia](#)

WESTERN AUSTRALIA, AUSTRALIA

BSc in Computer Science with Honours

2008 — 2013

Publications

[Practical Optional Types for Clojure \(ESOP16\)](#)

WITH ROWAN DAVIES, SAM TOBIN-HOCHSTADT

[A Practical Optional Type System for Clojure \(Honours dissertation\)](#)

SUPERVISED BY ROWAN DAVIES

Selected Open Source Contributions

[core.typed](#)
[core.match](#)
[Clojure](#)

LEAD DEVELOPER
CONTRIBUTOR
CONTRIBUTOR

Selected Talks

Typed Clojure: From Optional to Gradual Typing ([Video](#))
Typed Clojure in Practice ([Video](#))
Practical Optional Types for Clojure ([Slides](#))
Introduction to Logic Programming ([Video](#))

STRANGELOOP 2015
STRANGELOOP 2014
ESOP 2016
CLOJURE CONJ 2011

Skills

Technical expertise: Experienced with open source development and maintenance, including Git, GitHub, and continuous integration. Enjoys building static and dynamic program verification tools for dynamically typed languages. Experienced Clojure programmer. Some experience in Java, C, Racket, and Scheme.

Personal

Interests
Singing, guitar, clarinet, reading, teaching.