JUSTIN POMBRIO

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Brown University, Providence, RI Education

> PhD in Computer Science (Programming Languages) May 2018 Masters in Computer Science May 2014 Worcester Polytechnic Institute, Worcester, MA May 2011

Bachelor of Science in Computer Science Bachelor of Science in Mathematical Science

Experience Commure Iulv 2019-Iulv 2021

Commure is a small healthcare software company, bringing better software to doctors. Most significantly, I rewrote their data transformation DSL to increase expressiveness and decrease error-proneness. I also worked on data connectivity (FHIR ↔ JSON etc.), a testing framework (generating random templated FHIR data), data visualizations (DataDog and Commure Stencil), and a variety of other things.

CodeMirror-Blocks

Dec 2018-April 2019

CodeMirror-Blocks is an educational block editor. It sets itself apart from other block editors by (i) being accessible to blind users, (ii) offering both a block view and a text view of the code, and (iii) being (as much as possible) a drop-in replacement for the CodeMirror text editor.

Graduate TA for PL Course, Brown

Fall 2013, 2014, 2015, 2016

I constructed the programming assignments for the course and automated their grading. These assignments were the majority of the students' coursework; there were no exams. We graded both code and test cases. Automatically grading test cases is an interesting challenge: ask me about it. I also developed a teaching approach for programming languages called Mystery Languages, and won a Presidential Award for Excellence in Teaching from Brown in 2018.

Kavak, Concord, MA

June 2011 - June 2012

Kayak is a travel search engine. My most significant contribution was to redesign the ad management framework used by Kayak's account managers.

Major Qualifying Project, WPI

March 2010 - May 2011

My research project involved verifying cryptographic protocols using geometric logic. (Unpublished.)

Chitika, Marlborough, MA

Mav - Aua 2008

Chitika is an internet advertising company. Among other things, I automated their clickfraud detection.

Conference Talks: PLDI'14. ICFP'15. Onward'15. NEPLS'15. ICFP'17. PLDI'18

Artifact Evaluation Committee Reviewer: PLDI'16

Co-Organizer of Racket Summer School 2017

See github.com/justinpombrio

Publications Resugaring: Lifting Languages through Syntactic Sugar (thesis)

Justin Pombrio. Brown 2018.

Individual papers in PLDI 2014, ICFP 2015, ICFP 2017, and PLDI 2018*.

Can We Crowdsource Language Design?

Preston Tunnell Wilson, Justin Pombrio, Shriram Krishnamurthi. Onward! 2017.

Teaching Programming Languages by Experimental and Adversarial Thinking Justin Pombrio, Shriram Krishnamurthi, Kathi Fisler. SNAPL 2017...

Slimming Languages by Reducing Sugar: A Case for Semantics-Altering Transformations: Junsong Li, Justin Pombrio, Joe Gibbs Politz, Shriram Krishnamurthi. Onward! 2015.

^{*}Distinguished Artifact Award