

Daniel Patterson

dbp@dbpmail.net 401.368.5511

- SUMMARY** Currently: PhD student (programming languages); previously: backend web developer.
- ACADEMIC PUBLICATIONS**
- FunTAL: Reasonably Mixing a Functional Language with Assembly.*
 - Daniel Patterson, Jamie Perconti, Christos Dimoulas, and Amal Ahmed. PLDI 2017.
 - Linking Types for Multi-Language Software: Have Your Cake and Eat It Too.*
 - Daniel Patterson and Amal Ahmed. SNAPL 2017.
 - CaptainTeach: Multi-Stage, In-Flow Peer Review for Programming Assignments.*
 - Joe Gibbs Politz, Daniel Patterson, Kathi Fisler, and Shriram Krishnamurthi. ITiCSE 2014.
 - Python: The Full Monty - A Tested Semantics for the Python Programming Language.*
 - Joe Gibbs Politz, Alejandro Martinez, Matthew Milano, Sumner Warren, Daniel Patterson, Junsong Li, Anand Chitipothu, and Shriram Krishnamurthi. OOP-SLA 2013.
- RESEARCH EXPERIENCE**
- Developer - CaptainTeach* Summer 2013
Online IDE and Prototype Education Platform
 - Built an online IDE for programming assignments, on top of the Pyret Programming Language, with multi-stage assignments and interactive material.
 - Codesigner - Pyret Programming Language - pyret.org.* 2012-2013
Language Design
 - Helped design an education focused programming language at Brown University. Was partly or fully responsible for all of the core language features.
- TEACHING EXPERIENCE**
- Head TA for *Probability and Computation* (CS155), an upper level undergraduate course on probabilistic algorithms.
 - Assisted with *Programming Languages Lab* (CS1729), a half credit advanced portion of programming languages course.
- INDUSTRY EXPERIENCE**
- Founder, Position Development - Haskell, Ruby* 2014-2016
Media, Publishing, Non-Profits
 - Founded consulting business (positiondev.com) doing web development in Haskell and Ruby. Built ecommerce stores, subscription systems, paywalls, mailing lists. Clients include The Criterion Collection, Verso Books, Jacobin Magazine, among others. Client list built from freelancing going back to 2011.
 - Contractor - OCaml, Amazon AWS* Spring 2015
Cloud Orchestration - Inhabited Type
 - Built foundational libraries and implementations for a declarative language-based cloud orchestration startup. Wrote auto-generated Amazon AWS APIs for OCaml as well as parts of prototype product.
- SKILLS** *Haskell, SQL, Ruby, Python, OCaml, C, C++, x86, Linux, Git.*
- EDUCATION**
- Ph.D., Computer Science* (ongoing)
Northeastern University, Boston MA
 - Bachelor of Science, Math and Computer Science*
Brown University, Providence RI