Daniel Patterson

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WORK EXPERIENCE	*Engineering Intern* Facebook, Palo Alto	Summer 2007

- Worked on internal tools, and an experimental PHP to Python bridge written to allow new code to be written in Python (before PHP to C++ compiler was written).

Web Developer — 2007-2012
Freelance

- Framework built for client websites (Python, Postgresql).
- Digital music store for a small recording studio (OCaml, Paypal, Postgresql).
- Application for workplaces to cooperative manage shifts, and a declarative ajax framework for it (Haskell, Snap, Postgresql).
- Applications for students at universities to analyze food consumption data about the universities (Ruby, Rails, Postgresql).

Research / Teaching Assistant — 2012-2013
Brown University, Providence RI

- Designed and implemented a C++ framework for planar graph algorithms.
- Helped design research teaching programming language Pyret (pyret.org).
- Helped design Captain Teach, an online programming learning environment.
- Head TA for Probability and Computation (CS155)

Web Developer — 2013-2014
Freelance

- Paywall, subscription fulfillment system and mailing list for a magazine, integrated into existing Wordpress site (Haskell, PHP, Snap, Wordpress, Postgresql, Stripe).
- Interactive tool for people 70+ to plan their lives, as part of a research study at a prestigious university (Haskell, Snap, Postgresql, Redis).

SKILLS

Haskell, SQL, Ruby, Python, OCaml, C, C++, x86, Java, Linux, Git, Darcs, Mercurial.

PUBLICATIONS

- *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. OOPSLA 2013.

RELEVANT COURSEWORK

- *Probabilistic Methods in Computer Science (CS155),*
- *Design and Analysis of Algorithms (CS157),*
- *Algorithms for Big Data (CS2951H),*
- *Information Theory (APMA1710),*

EDUCATION

Bachelor of Science, Math and Computer Science
Brown University, Providence RI, December 2013