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Justin Raymond

Education

2015–2016	**M.A. in Computer Science**, *Wesleyan University*, Middletown, CT, GPA 4.11. Research static complexity analysis of functional languages.
2010–2014	**B.A. in Computer Science, Biology**, *Wesleyan University*, Middletown, CT, GPA 3.74. Computer Science courses: Design of Programming Languages, Computer Checked Programs and Proofs, Automated Theorem Proving, Automata Theory and Formal Languages, Algorithms and Complexity, Data Structures, Computer Graphics, Computer Structure and Organization, Genomics and Bioinformatics, Evolutionary Bioinformatics, Tutorial in Type Theory.

Work Experience

2015–present	**Visiting Lecturer in Computer Science**, Wesleyan University. Teach Introduction to Programming in Python.
2014–present	**Co-founder, programmer**, Joomah. Develop web application using Python/Django (joomah.com). Joomah is a startup which connects employers with jobseekers in Africa. Raised more than $150,000 in funding.
2013–2014, 2015–present	**Teacher's Assistant**, *Computer Science Department*, Wesleyan University. Run help sessions for computer science students. Required knowledge of Python, Java, C0 and SML.
Sep 2015–Dec 2015	**Peer Tutor**, *Computer Science Department*, Wesleyan University. Tutor students taking Design of Programming Languages. Required use of OCaml.
Aug 2013 – Aug 2014	**Programmer**, *Instructional Media Services*, Wesleyan University. Worked on cmdr (wesleyan.github.io/cmdr/), an open source audio/visual control system. Required use of Ruby, CouchDB, Javascript, and HTML5/CSS3.
Mar 2013 – Dec 2014	**Project Leader**, Wesleyan University. Led a student forum on mobile app development. Developed an Andriod and iOS app using Apache Cordova (github.com/WesAppGroup).

Skills

Languages	Haskell, OCaml, SML, Agda, C, C++, Python, Javascript, Java, HTML, CSS, Ruby
Frameworks	Django, Flask, Yesod, Servant, Ruby on Rails
Operating Systems	Linux, OS X
Version control	git

Projects

Some of the projects I've worked on. For a complete list go to github.com/jrraymond.

otto	otto is an auto-grading library in OCaml. otto is extremely robust. Tests are run in a separate process. Code that crashes the process or loops infinitely without allocating will not hang the auto-grader. Source: github.com/jrraymond/otto
MAAX	An NES AI written in Haskell. MAAX is an implementation of the NeuroEvolution of Augmenting Topologies (NEAT) algorithm. Source: github.com/mdietz94/MAAX

ray-tracer	A program that generates photorealistic images. Features include antialiasing, soft-shadows, reflections, refractions, depth of field, glossy reflections, wavefront scene description parsing, and animated gifs. Distributed using Cloud Haskell. Source and example images: github.com/jrraymond/ray-tracer
Units as Types	Compile time checking of units of measure in Agda. A value is a member of a type family indexed by its units of measure. By construction all members of this type family have units that are both correct and in their most reduced form. Source: https://github.com/jrraymond/UnitsAsTypes
Gödel's T	An implementation of Gödel's T in Agda. Gödel's T combines function types with natural numbers. Iteration is provided via primitive recursion. Consequently only total functions may be defined. Includes proofs of progress (a well-typed term is either a value or takes a step of evaluation) and preservation (if a well-type term takes a step of evaluation then its type is preserved). Source: https://github.com/jrraymond/GodelsT
GHC	Contributions to Data.List and Data.Vector documentation.