

Michelle Fullwood

about

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programming

Python, Django, Flask
JavaScript, jQuery
R, Perl, Matlab/Octave
SQL, git

languages

native English
advanced French
Mandarin
intermediate Arabic
elementary Japanese
Hungarian

awards

National Science Foundation
2011 NSF Graduate
Research Fellowship
Cornell University
2004 Merrill Scholar
2001 College Scholar
2000 Dean's Scholar
2002,2004 Achievement
Awards in Arabic
2000–2004 Dean's List
Government of Singapore
2000 PSC Overseas
Merit Scholarship

summary

Python developer with a background in speech & language processing and web development. Excellent analytic skills honed via degrees in linguistics and mathematics and a penchant for solving puzzles. Passionate about learning and helping others learn.

education

- since 2010 **Ph.D. program in Linguistics, Massachusetts Institute of Technology**
- Research on problems in computational morphology and formal phonology
 - Coursework in linguistics, machine learning and Bayesian techniques
 - Teaching assistant in introductory linguistics and phonology
- 2000–2004 **B.A. in Linguistics and Mathematics, Cornell University**
- Graduated *magna cum laude* and with distinction in all subjects, 4.0 GPA
 - Study abroad, Fall 2003: Budapest Semesters in Mathematics

experience

- 2008–2010 **Web Developer, Imperial Consulting** Boston, MA
- Developed web applications, both front and back end, in Python, Django and jQuery, for clients in fields ranging from education to biomedical to finance
- 2008–2009 **External Consultant, Centre for Strategic Infocomm Technologies**
- Advised client on evaluation procedures in speech and natural language processing
- 2004–2008 **R&D Engineer, later Consultant, Centre for Strategic Infocomm Technologies** Singapore
- Researched techniques and built engines for speech recognition, language and speaker identification, and cross-language information retrieval
 - Managed projects to evaluate and acquire systems
- 2004 **Summer Intern, PARC** Palo Alto, CA
- Engineered a computational Lexical Functional Grammar to cover the basic sentence constructions of Modern Standard Arabic
 - Built a root-and-pattern-based finite state Arabic morphological analyzer

projects

- since 2012 **Bayesian inference of non-concatenative morphology** MIT
- Extended state-of-the-art Bayesian techniques for morphological learning to the more complex case of non-concatenative morphology (Arabic, Hebrew)
 - Wrote a Markov Chain Monte Carlo (MCMC) sampler in Python to perform inference on a Bayesian generative model of non-concatenative morphology
- 2014 **Fuzzy Arabic Dictionary** fuzzyarabic.herokuapp.com
- Developed a novel Arabic dictionary that can be queried via transliteration, rather than needing to know the exact orthography, mashing up the Yamli transliteration service and Buckwalter Arabic Morphological Analyzer
- since 2013 **Volunteer tutor, PyLadies Boston**
- Delivered presentations on beginner and intermediate Python topics and tutored women who are learning to program in Python