

Andrew L. Watts

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Professional Summary

Seasoned, well-rounded Software Developer with a decade of experience of working as part of a research team in a lab running large-scale human linguistics studies. Demonstrated independent learner who enjoys learning new languages and frameworks, solving new problems, and improving quality of existing code. History of successful projects, effectively translating domain needs into software. Capable of quickly coming up to speed on new programming languages and frameworks. Contributions to several open source projects.

Education

The Ohio State University

M.A., Linguistics (Computational Linguistics specialization)

B.A., Computer and Information Science and Linguistics

Columbus, Ohio

June 2006

June 2005

Programming and Data Processing Skills

Software Development: Object-oriented design, functional programming, data modeling, version control (Git, Hg, SVN), web programming

Programming: Python, Javascript, TypeScript, CSS, HTML, R, Ruby, C, C++, Rust, Perl, Java, Bash, Matlab, XML, LaTeX, PHP

Databases: SQL, MySQL/MariaDB, SQLite, Postgres

Server Software: nginx, Apache, OpenDirectory/LDAP, NFS

Operating Systems: macOS, Linux, Windows

Experience

University of Rochester Department of Brain and Cognitive Sciences

Laboratory Technician

Rochester, New York

April 2007 – present

Providing programming and programming support for linguistics research involving with eye-tracking, self-paced reading, and corpus searches.

CrowdExp: Created a web-based system in Python (Django) and JavaScript for students in an undergraduate psycholinguistics course to design a Self Paced Reading experiment, create stimuli, run the experiment on Amazon Mechanical Turk, and collect the data for analysis.

Experiment creation: Wrote and assisted undergraduate and graduate students plus postdocs with creation of experiment logic and user interfaces. Wrote scripts in the ExBuilder experiment scripting language, using the Linger self-paced reading package, and the creation of numerous web-based experiments, often implementing novel experiment paradigms for the web.

Improved resources: Updated two Flash applets (*FlexSPR* and *ALLApp*) from Flex 3 to Flex 4 and extended with new trial types.

Clean and analyze data in R and Python Pandas: Used a decade of Mechanical Turk results to answer questions within the lab about our online subject pool.

Manage lab workflow on Amazon Mechanical Turk via creation of a set of Python command line scripts

Managing computing environment, immediately and effectively addressing needs of over 25 active users.

Monitor, trouble-shoot, and update mixed macOS, Windows XP/Vista/7, and Linux network with OpenDirectory and NFS

Created lab web site using Jekyll static site generator and set up and maintained lab nginx web server.

Managing Laboratory logistics

Schedule and oversee weekly lab meetings, addressing status of specific projects, needs of users, discussions of salient current outside research, practice talks, and conference preparation.

Manage undergraduate research assistants, regularly assessing performance, clarifying next steps in projects, and ensuring they have access to appropriate resources.