

Adam B. Goldstein

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Education

Worcester Polytechnic Institute
MS in Computer Science

September 2009 - May 2011
Worcester, MA

- Developed for ASSISTments, an Intelligent Tutoring System primarily used for Math.
- Awarded the NSF GK-12 PIMSE Fellowship, which funds graduate students to serve as an assistant teacher and "scientist in the classroom" for local Worcester, MA middle schools to advocate for STEM careers.
 - Ran an after school Computer Club and assisted with the Math Team.
- Conducted and published Educational Data Mining and Artificial Intelligence in Education research.
 - Baker, Ryan, S.J.d, **Goldstein, Adam B.**, Heffernan, Neil T.: Detecting the Moment of Learning. *Intelligent Tutoring Systems*, 10, 26-35 (2010) [Full Conference Paper]. Nominated for Best Paper; **Awarded Best Oral Presentation** ITS 2010.
 - **Goldstein, Adam B.**, Baker, Ryan, S.J.d, Heffernan, Neil T.: Pinpointing Learning Moments. *Educational Data Mining* (2010) [Poster].
 - Baker, Ryan, S.J.d, **Goldstein, Adam B.**, Heffernan, Neil T.: Detecting the Moment of Learning. *International Journal of Artificial Intelligence in Education* (Accepted) [Journal].
- Presented and participated as a member of the Tutor Research Group and Artificial Intelligence Research Group.

Brandeis University
BA in Computer Science / East Asian Studies

September 2005 - May 2009
Waltham, MA

- Worked as a Web and Applications Developer for the Web and Middleware Development Group all years and one summer.
- Programmed for SIP Communicator as a part of the 2007 Google Summer of Code.
- Studied in Kyoto, Japan 2007-2008 as part of KCJS, finishing with approximately 2-kyu level Japanese.
- Participated in Men's Varsity Soccer, Computer Operators Group, Snowboarding Club, and Japanese Language Table.
- Presented at the 2009 Boston Japanese Speech Contest (ボストン近郊日本語スピーチ発表会).

Work Experience

Senior Software Systems Engineer
The MITRE Corporation

June 2011 - Present
Bedford, MA

- Developed in Ruby on Rails for ONC funded OSS healthcare projects, including hQuery, Cypress, and popHealth.
 - Wrote CoffeeScript to automatically generate executable JavaScript as MapReduce jobs via MongoDB.
 - Refactored the entire Cypress codebase from v1.0 to v1.5 and introduced Twitter Bootstrap.
 - Implemented functionality to generate C32 based patients based on imported HQMF documents.
 - Created and maintained several project demo servers via AWS and Heroku.
- Worked as technical lead for hReader, a research driven OSS iPad app for securely managing health history.
 - Implemented OAuth2/OpenIDConnect, wrote health applets, and demonstrated at HIMSS.
- Programmed in C a multi-threaded daemon that polls for datagrams and responds with Gnome Keyring data.
- Volunteered under the Civic Duty program to run a programming club at a local Watertown, MA high school.
- Taught a 10-week JavaScript course at the Cambridge Center for Adult Education.

Senior Developer
Worcester Polytechnic Institute

September 2009 – May 2011
Worcester, MA

- Developed in Ruby on Rails for ASSISTments, an Intelligent Tutoring System primarily used for Math.
- Programmed many bug fixes, features, and UI improvements, including:
 - Improved precision of logging user actions to support synchronization with Android devices.
 - Redesigned and implemented UIs for tutor class creation and content building systems.
 - Implemented Bayesian Knowledge Tracing linked between Ruby and Java GWT systems.
- Worked as lab manager for the system in 2010:
 - Managed several undergraduates, delegating tasks and overseeing progress of 2 content builders and 6 programmers. Assisted with initial designs, creating mock-ups, and planning for test cases.
 - Maintained SVN, both to manage development/production releases and also to control access for a rapidly changing staff.
 - Created a developer's image for Windows 7 boxes and wrote a batch file and shell script for environment setup for external developers.
 - Documentation: Wrote an XML/XSL list of all Ruby gems on the production servers (predating bundler), wrote guides for how to update nginx, PostgreSQL, and firewall configuration.

Assistant Software Engineer
Charles River Analytics

May 2009 - August 2009
Cambridge, MA

- Tested and developed in Java for SPARTEN, a program that uses genetic algorithms to automate coordinating routes for Unmanned Aerial Vehicles.
- Wrote meta-machine learning to find ideal initial parameters for the UAV planning's EA.
- Conducted significant refactoring to remove a lot of business logic from GUIs, transitioning the project from a stand-alone prototype to be ready for integration with other external engines.
- Wrote hundreds of JUnit test cases for the project, which previously had none.
- Presented progress and explained the SPARTEN project to the entire company.

Web and Applications Developer
Brandeis University Web Development

October 2005 - May 2009
Waltham, MA

- Developed and maintained my.brandeis.edu in TCL, HTML, and SQL for students.
- Created applications and scripts in Perl and PHP for Brandeis' Moodle and administration.
- Programmed many bug fixes and features, including:
 - Custom calendar views in myBrandeis.
 - An automated usage statistics generator with graphs at the daily, weekly, monthly, and annual level.
 - XML parser/file extractor to migrate an old file management scheme to a newer one.
 - A scrolling widget for BrandeisNOW's news and multimedia events.

Skills and Technologies

- **Languages:** Ruby, JavaScript (CoffeeScript), Java, Objective-C
- **Web technologies:** Rails, HTML, jQuery, CSS (Sass), MongoDB, iOS 6, MySQL/PostgreSQL
- Excellent communication skills, both written and oral, with technical and non-technical persons.
- Knowledgeable and comfortable with software development design patterns, particularly Agile.
- Secret security clearance in the United States.