

Ryan Muller

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OBJECTIVE	To create software that empowers people to discover, learn, and manage knowledge. I understand effective learning and have worked with data and people to bring educational content to interactive web interfaces. I would like to further my experience using machine learning and data to create adaptive technology, particularly in the fields of education, healthcare, and scientific research.	
EXPERIENCE	Geknowm: Mapping human knowledge Sept 2012 – Jan 2014 Developed a complete web application (http://geknozm.com) using Ruby on Rails and JavaScript with Backbone.js for organizing educational content, authoring and taking quizzes, and displaying a personal knowledge profile. Designed novel assessment interactions, knowledge extraction algorithms, scoring mechanisms, and data visualizations. Learnstream: Web-based learning platform 2009 – 2011 <i>Client: Harvey Mudd College</i> Designed and developed innovative web-based learning platforms to enhance studying for students using video and spaced repetition practice. The software (http://rudinium.herokuapp.com) was piloted for a mathematics course with over 60 students at Harvey Mudd College. Led a team in developing a second version for physics and calculus content (http://learnstream.herokuapp.com). Cooperative Search with Autonomous Vehicles in a 3D Aquatic Testbed 2010 – 2011 <i>Client: DYNAR (Dynamic Navigation for Aquatic Robots)</i> Project manager for a team of math and engineering students to develop an aquatic testbed and design and deploy control systems and cooperative behavior algorithms for robotic submarines. Presented work at the Joint Math Meetings in January 2011. Resource Allocation for Cloud Computing Summer 2010 <i>Microsoft Research Asia (UCLA Research in Industrial Projects for Students program)</i> Investigated modern research on cloud computing. Designed and simulated resource management systems for cloud computing.	
EDUCATION	Carnegie Mellon University <i>PhD program (one year), Human-Computer Interaction Institute</i> 2011 – 2012 <ul style="list-style-type: none">• NSF Graduate Research Fellowship recipient• Program in Interdisciplinary Education Research (PIER) fellow Harvey Mudd College <i>B.S., Joint Mathematics and Computer Science major</i> 2007 – 2011 <ul style="list-style-type: none">• GPA: 3.73/4.0 (magna cum laude)• Math, computer science, and humanities departmental honors	
SKILLS	Programming Ruby, Python, Java, C, C++, C#, Scheme, Haskell, MATLAB Web development HTML, CSS, JavaScript/jQuery/Backbone.js, Rails, Django Machine learning Weka, educational data mining Mathematics Problem solving (top 500 Putnam), modeling (MCM Meritorious), tutoring, content writing	