

Max Harms

Software Developer

Mathematics, Machine Learning,
Artificial Intelligence, Statistics

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Skills

Fluent in **Python, Java, PHP, Javascript, HTML/CSS**
Deeply skilled in **J, MySQL, Matlab/Octave**
Experienced in **C++, Ruby, Android, Haskell**, and **Flash**

Strong interpersonal and organizational skills, including conflict resolution, collaboration, compassionate communication. Strong interest in Agile development and functional programming.

Experience

Umap Technologies / Programmer and Mathematician

2016 - PRESENT

- ★ Built core code to process photographs into 3d models and maps, accessed and processed entirely on the cloud.
- ★ Managed a Django web server using custom python code sitting on top of high-power libraries and custom C++ to process big-data in a scalable way.
- ★ Worked with AWS (including EC2, S3, and SQS), Docker, as well as a host of libraries and tools such as PBA and ImageMagick.
- ★ Wore many hats in a startup environment, including doing front-end coding, technical interviewing, copy-editing, and onboarding.

Rationality-doj.com / Leader and Programmer

2014 - PRESENT

- ★ Led and managed a [bi-weekly practice group](#) oriented around improving reasoning ability and emotional intelligence.
- ★ Created an idea auction system and web-app to allow authenticated users to collectively decide on practice topics.

Bayesian Modeling and Data Hacking / Analyst and Programmer

2014 - PRESENT

- ★ Used probabilistic analysis (including sub-techniques such as Fermi estimation) to regularly solve hard problems such as deciding how to orient professionally.
- ★ Tracked huge quantities of personal data. This data then feeds into custom Java software to build an interactive webpage with reports and visualization.

Websites and Web-Apps / Programmer and Designer

2010 - PRESENT

- ★ Created dozens of websites and web applications, including professional websites, personal websites, games, tools, and more.
- ★ Highlights include [my personal website](#), a [cellular-automata programming language/toolkit](#), a prototype for an educational website with interactive tutorials, and a number of physics simulations.

"Coi" Android Game / Programmer

2015

- ★ Learned Android and pushed the boundaries of what I had previously accomplished in games programming in only 58 hours of work.
- ★ Created a [proof-of-concept Android game](#) with 3d environments, custom models (created in Blender), and speech recognition using PocketSphinx.

Web Presence / Programmer

2009 - 2014

- ★ Created highly [customized Wordpress sites](#) for clients.
- ★ Wrote plugins and themes using PHP, CSS, and Javascript.
- ★ Managed Linux servers.

Simple AIs & OCR / Programmer

2010 - 2013

- ★ Built artificial intelligences in Java that interact in a live environment to play Tetris, Ergo, 2048, and a bunch of others.
- ★ Extended this code-base to do optical character recognition and statistics on Khan Academy.

Education

Machine Learning and Artificial Intelligence / Coursera

2011 - 2012

Passed [Koller](#), [Hinton](#), [Thrun](#), [Norvig](#), and [Ng](#)'s classes on artificial intelligence with distinction each time (meaning top 20% of students). Other great online classes I've had include quantum computing, programming for drones and robots, and computational neuroscience.

Mathematical Optimization & Probability Theory / Independent

2008 - PRESENT

I have an unschooling background, and have translated that into being a life-long learner. A big part of that has been the pursuit of advanced mathematics. Over the years I've taught myself calculus, complex analysis, linear algebra, combinatorics, automata theory, and many other fascinating subjects.

Game Design / Lane Community College

2007 - 2009, EUGENE, OREGON