Nathaniel Soares

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Machine Intelligence Research Institute *Research Fellow* *April 2014 - Present*
- We do foundational mathematical research to ensure smarter-than-human artificial intelligence has a positive impact. At MIRI, I have published a number of papers, attended a number of conferences, and given a number of talks. See intelligence.org/all-publications/.

Google *Software Engineer, Google Compute Engine* *June 2012 - March 2014*
- I make the tools that make Google Compute Engine awesome.
- I develop and hone plugins integrating vim with Google tools.
- I led a new graduate donation campaign in 2012.

Microsoft *Software Development Engineer, Office UEX* *September 2011 - April 2012*
- Owner of high contrast, low color, & high dpi modes of Microsoft Office.
- Owner of status bar, message bar, bitmaps, icons, & assorted ribbon visuals.
- Ownership spanned everything from final visuals to rendering code.
- Cleaned and streamlined the aging automated testing system.

National Institute of Standards and Technology *Research Associate* *May 2010 - May 2011*
- Automated the upgrade of building design requirements to higher energy efficiency standards. Material and system prices do not scale linearly, so finding optimal configurations was NP hard.
- Integrated pricing data from RSMeans and ASHRAE databases. Much of the integration was not possible until runtime, as local air pressure and temperature were necessary for unit conversions.
- Wrote tools to analyze the economic, environmental, and social differences between energy standards by allowing users to interact with a huge dataset including climate data, pricing data, and building design data.
- Created a web interface to allow architects and state legislatures to access these tools.

National Defense University, Department of Defense *Contractor* *April 2008 - April 2009*
- Wrote tools to automate the DIACAP on NDU servers. The tools detected and ran hundreds of tests required by the DIACAP and automatically create documents for open issues. This process was used to ensure the security of new servers.
- Created general-purpose conflict simulator for use in NDU classrooms. Teachers may specify characters, dialog, and objectives to create custom conflict simulators used to train students.
- Designed application to facilitate communication between NDU teachers and deployed troops. Application consisted of a web interface integrating many pre-existing NDU tools.

Education

George Washington University, Washington, DC May 2011
B.S. in Computer Science & Economics GPA 4.00 in major, 3.93 overall

Personal Experience

Various personal projects *including contributions to open source projects* github.com/Soares
Computer Programming Teacher Spring 2007
- Provided C/C++ class to 12 students at a high school which did not offer computer science courses.
- Worked with school and state to accredit class.
- Received commendation from Vermont state senate.

Entrepreneur's Club *President* 2010 - 2011
Green Primer (Academic) *Node.js, HTML Canvas* 2010
- Tool for architects with real-time layout analysis and annotations suggesting ways to save energy.

- Fluid dynamic simulator helps assess ventilation and heat flow.
- Suggests most cost-effective building materials within budget.

Pascal compiler (Academic) *C and MIPS*   2009
File system annotations (Academic) *Linux kernel module, C*   2008
CPU design (Academic) *Verilog*   2009
Maze / adventure game (Academic) *C# with XNA*   2008
Association for Computing Machinists   2007 - Present

- Collegiate Cyber Defense Competition, placed 2nd in Mid-Atlantic region in 2009.
- International Collegiate Programming Competition, 2007, 2008, 2010.

F.I.R.S.T. Robotics team 885   2003 - 2012
- Team Coach - Led the drive team during matches   2004 - 2007
- Lead Engineer - Led the design and construction of the robot   2006 - 2007
- Mentor - Train and assist current team members   2008 - 2012

Computer Science Tutor *George Washington University*   2008 - 2011

Awards and Honors

GWU Distinguished Scholar *(top 2% of engineering school)*   2010
AXA Achievement Scholarship *($10,000, 52 people/year nation-wide)*   2007
GWU Research and Instructional Technology Committee *(Student representative)*   2008
TBΠ Honorary Engineering Society   2008-Present
Dean's Honors List of Distinguished Students   2007-2011
National Honors Society   2006-Present

Technical Skills

Experienced	C, Java, Python, Javascript, Haskell
Comfortable	C++, PHP, Clojure, Perl, Ruby, Scheme, Coffeescript, Assembler (RISC)
Acquainted	Verilog, Visual Basic, Assembler (x86)
Tools & Skills	PostgreSQL, MySQL, (X)HTML, CSS, Django, Jquery, Node.js, Matlab, Flash, OpenGL
Platforms	Linux (Debian, Fedora, Arch), Windows (XP, 7, Server, 8), Mac (OSX)

References

Luke Muehlhauser *Executive Officer, MIRI*   luke@intelligence.org
Doug Kingston *Manager, Google*   dpk@google.com
Dr. Joshua Kneifel *Economist, Engineering Laboratory, NIST*   (301) 975-6857
Dr. Bhagirath Narahari *Associate Dean for Undergraduate Affairs, GWU*   (202) 994-3326