Nathaniel Soares

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Google *Software Engineer, Google Compute Engine* *June 2012 - Present*

- I write the tools that make Google Compute Engine great.
- I develop and hone plugins that integrate vim with Google tools.
- I lead a new graduate donation campaign.

Microsoft *Software Development Engineer, Office UEX* *September 2011 - April 2012*

- Owner of high contrast, low color, & high dpi modes.
- Owner of status bar, message bar, bitmaps, icons, & assorted ribbon visuals.
- Manager of everything from visual positioning to low-level rendering in areas of ownership.
- Took the initiative to clean and streamline the aging automated testing system.

NIST *Research Associate* *May 2010 - May 2011*

- Automated the upgrading of building designs to higher energy standards. Material and system prices do not scale linearly. Finding the optimal configuration is an NP hard problem. Heuristics were used.
- Integrated pricing data from RSMeans and ASHRAE databases. Much of the integration was not possible until runtime, as local air pressure and temperature are necessary for unit conversions.
- Wrote tools to analyze the economic, environmental, and social differences between energy standards. Configuration of interest rate, climate zone, pricing data, and building design resulted in millions of combinations. Results were presented in real time.
- 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 detect and run hundreds of tests required by the DIACAP and automatically create documents for open issues. This process is used to ensure the security of new NDU 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 in varying scenarios.
- 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

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 energy-saving annotations
- Fluid dynamic simulator assesses ventilation and head flow
- Suggests most cost-effective building materials within budget

Myelin *javascript DOM syncing tool, see soares.github.com/myelin* 2011

NateSoares.com *Made with Django & PostgreSQL* 2009

Open source contributions *Bug fixes and minor features for Django & jQueryUI*

Pascal compiler (Academic) *C and MIPS* 2009

File system annotations (Academic) *Linux kernel module, C* 2008

CPU design (Academic) *Verilog* 2009

Course registration software (Academic) *PHP and MySQL* 2009

Maze / adventure game (Academic) *C# with XNA* 2008

Association for Computing Machinists 2007 - Present

- Collegiate Cyber Defense Competition, placed 2^{nd} in Mid-Atlantic twice
- International Collegiate Programming Competition, three years

F.I.R.S.T. Robotics team 885 2003 - Present

- Team Coach - Lead the drive team during matches 2004 - 2007
- Lead Engineer - Lead 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-

Dean's Honors List of Distinguished Students 2007-2011

National Honors Society 2006-

Technical Skills

Experienced	C, Java, Python, Javascript
Comfortable	C++, Haskell, 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

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

Jim Wick *Mentor, FIRST Robotics team 885* (802) 889-3524