# Joseph P. Sanford

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## Education

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| 2012–Present | **M.Sc., Computer Science**, *Tufts University*, Medford, MA. |
| 2003-2005; 2010-2012 | **B.Sc., Information Sciences and Technology**, *Pennsylvania State University*, University Park, PA. |

## Professional Experience Highlights

**08.12-Present** — **Graduate Research and Teaching Assistant**, *Tufts University*, Medford, MA.
- Assisted students, graded papers, and helped teach 5 courses: Databases (Graduate level), Electronic Musical Instrument Design, Computational Models in Cognitive Science, Unix Systems Administration, and Introduction to Computer Science
- Created back-end infrastructure, custom scripts, and interfaces for automated grading
- Aided students in creating electronic musical instruments, including circuit design, signal processing, and use of MIDI.
- Lead developer of BlockyTalky, a tangible tool for learning Computer Science (more at http://lpc.cs.tufts.edu/blockytalky/)
- Led teams composed of undergraduate and graduate students to further develop BlockyTalky, including usability studies

**06.09-present** — **Webmaster**, *Society of the First Infantry Division*, Ambler, PA.
- Created a new web site for the Society, originally in PHP and porting to Django
- Redesigned member management area to be more user friendly and easier to use
- Managed a database of over 11000 active members

**05.11-06.12** — **Research Assistant**, *Applied Cognitive Sciences Lab*, University Park, PA.
- Led a study examining the acquisition of cognitive motor skills with respect to varying training regimens
- Aided in the development of an intelligent tutoring system, including contributing to the development of tutor methodology capable of transitioning learners from declarative to procedural knowledge
- Assisted graduate students with their research, including developing and maintaining Java and C applications
- Edited and revised academic publications, tutorials, and FAQs

**01.10-07.10** — **Application Developer**, *Majestic Consulting Group*, Marlton, NJ.
- Created new installations of MS Dynamics CRM and MS SQL Server, including installing Reporting and Integration Services
- Created dynamic SSRS reports that work in conjunction with Microsoft Dynamics CRM, as well as customizing reports and their interfaces based on customer guidelines
- Developed customizations for Microsoft CRM utilizing custom Javascript and C# scripts and applications

**08.08-12.09** — **Contractor/Consultant**, *Neapco, Inc.*, Pottstown, PA.
- Created an entire database in Oracle based off a set of linked spreadsheets
- Created a PHP front-end interface for users to load and manipulate data
- Worked through the development lifecycle with users, testing applications and providing feedback for the introduction of improvements and the management of bugs

**04.07-08.08** — **Intern/Consultant**, *PJM Interconnection*, Norristown, PA.
- Handled daily customer issues in the Database and System Administrator on Duty role for Oracle Databases. This included account creations and deletions, access issues, and security issues
- Fully automated monthly data restores and validations using SSIS and SSRS
- Acted as Production Release Coordinator, managing software development and release processes
- Acted as system administrator, including writing bash scripts, automating jobs, managing storage, access, and patching of systems.

## Computer Skills

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| Languages | Python, Java, Ruby, Bash, Swift, C#, C++, C, Objective-C, Max/MSP, PureData, SQL, Lisp, PHP, JavaScript, HTML, CSS |
| Technologies | Linux, Mac OS, and Windows systems, Eclipse, Sublime Text, Emacs, VMWare and Virtualization, DBMS (Postgres, MySQL, MS SQL Server, Oracle, SQLite) Web Frameworks and Servers (Django, Flask, Tornado, Ruby on Rails; Apache, nginx, lighttpd), Redis, Microsoft Business Intelligence Tools (Reporting, Analytic, and Integration Services), Visual Studio, SQL Server (2000, 2005, 2008), Oracle 12c, Oracle Enterprise Manager |
| Interests | Developing a home automation system using Raspberry Pis and Android for electronics, lights, door, camera, and HVAC controls. Play guitar, bass, and banjo. Building/designing effects pedals. Current project is a heavily modified guitar/MIDI interface. |