# Résumé of Kent S Johnson

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| **Address** | 18 Harrington Rd Cambridge, MA 02140 Note: I am *not* available for relocation. |
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## Skills

Master programmer and toolsmith with strong background in object-oriented programming and agile development. Proven ability to design, develop and deliver top-quality, working software using C#, Python, R and Java. Working knowledge of statistics and machine learning.

Specific experience includes

* GUI application development using C#, Windows Forms, Jython, Java Swing
* Statistical analysis and machine learning with R and Octave
* Database development with Python DB-API, Java JDBC, SQL, MS SQL Server, PostgreSQL
* Teaching, mentoring and using agile software development practices
* Web application development using Python, Django, JavaScript, AJAX, Java applets and servlets, HTML, XML and template languages
* Web application hosting with Apache, mod\_python and Linux
* Test-driven development with NUnit, JUnit and Python unittest
* Version control systems including Mercurial, Subversion, CVS, StarTeam, SourceSafe
* Project tracking with Trac and StarTeam
* Code review using ReviewBoard
* Moderator, python-tutor mailing list
* Contributor to open-source projects including Python, Jython, Jetty, Velocity

## Professional History

**PerkinElmer, Hopkinton, MA,** November 2011 (purchase of Caliper) to present  
**Caliper Life Sciences, Hopkinton, MA,** January 2011 (purchase of CRi) to November 2011  
**Cambridge Research & Instrumentation, Woburn, MA,** April 2008 to December 2010  
***Principal Software Developer***

Architect and principal developer of inForm software to analyze medical images using C# with WinForms.

Performed statistical analysis of internal and external experiments using R and Python. Explored use of machine learning for segmenting and phenotyping cells in tissue images.

Using R, modeled the response of the Vectra scanner to specific filters and fluors. Initially this allowed researchers at Mass General Hospital to optimize use of the Vectra scanner. The model is now used in inForm software to synthesize spectral response.

Introduced many new practices and tools including agile development, unit testing, continuous integration, code review and Mercurial revision control.

**PreFab Software, Chelmsford, MA, March 2007 to April 2008**  
Principal Software Developer

Principal developer of [blogcosm.com](http://blogcosm.com) including database design and development, extensive data acquisition and storage, custom charting and implementation of the actual website. The website is built using Python, Django, JavaScript, AJAX and jQuery with a PostgreSQL database.

Web site administration using Apache, mod\_python, Linux and AWStats.

**SkillSoft Corp., Nashua, NH, April 2001 to February 2007**  
Senior Software Developer

Developed a distributed web application and rich client for maintenance of a courseware database. The rich client is written in Jython and Swing. The back end is written in Jython and Java using the Jetty web server, Java servlets and MS-SQL Server.

Developed a SCORM-compliant web server using Python, CherryPy and XML-RPC.

Developed an editor for custom course content using Jython, Java and Swing. The editor includes an embedded web server based on Jetty.

Developed a database maintenance utility using Jython and MS-SQL Server.

Taught Python programming and led study groups on agile software development.

Enhanced SkillSoft content player applet including localization in 14 languages and making it accessible for users with disabilities (section 508 compliance).

**Transparent Language, Inc., Merrimack, NH, 1995 to April 2001**  
Senior Software Engineer

*LanguagePro:* Principal developer of LanguagePro Server, a Web application server written in Java using servlets, XML, JDBC and Unicode. It provides HTTP access to language learning content including text, sound and video. User and administrator interface is browser-based using HTML, JavaScript, applets and WebMacro. Localized to nine languages including Chinese, Japanese and Korean.

*Mentoring:* Organized and led numerous study groups on topics such as Extreme Programming, software design and construction and technical topics.

*Vocabulary Master:* Principal developer of Vocabulary Master, a vocabulary study program. Written in C++ for Mac and Windows,.

*LanguageNow:* Lead programmer for three major releases of Macintosh version of company's flagship language learning product written in C++. Key participant in product development process from specification through final test.

**Howtek, Inc., Hudson, NH, 1994 to 1995**  
Senior Software Engineer

Worked on Aurora image-acquisition software for the Howtek D4000, 4500 and 7500 drum scanners, using MPW C and Microsoft Visual C, including major improvements in the color separation algorithms and numerous bug-fixes.

**PixelCraft, Inc., San Leandro, CA. 1993 (acquisition of Barneyscan) to 1994**  
Senior Software Engineer

Developed QuickScan image-acquisition software for the PixelCraft Pro Imager 8000 flatbed scanner and Howtek D4000 drum scanner. Supervised development of QuickScan for PixelCraft 7650, Sharp JX-610 and UMAX 1200SE scanners. Assisted with design, development and testing of PixelCraft Pro Imager 8000 scanner hardware and firmware.

**Barneyscan Corporation, San Leandro, CA. 1987 to 1992**  
Co-founder; Director of System Architecture

*CIS-3515 Slide Scanner:* Co-designer of the world's first desktop transparency scanner. Received US patent.

*CIS-4520 Multi-format Film Scanner:* Principal software and electronics architect for CIS-4520 scanner. Managed five programmers and engineers.

## Contributions to Open Source

I have made contributions to open-source projects including these:

* [Python](http://www.python.org/) - a popular programming language
* [Jython](http://www.jython.org/) - Python ported to Java
* [Jetty](http://jetty.mortbay.org/) - a high-performance, embeddable web server and Java servlet container
* [Velocity](http://jakarta.apache.org/velocity/) - a Java-based template engine

For six years I was moderator of and prolific contributor to the [python-tutor](http://mail.python.org/mailman/listinfo/tutor) mailing list.

## Education

**Stanford edX**  
Statistical Learning (Hastie & Tibshirani) 2014

**Coursera.org courses completed with distinction**  
Data Analysis (Jeff Leek) 2013

Neural Networks for Machine Learning (Geoffry Hinton) 2012  
Computing for Data Analysis (Roger Peng) 2012  
Machine Learning (Andrew Ng) 2011

**University of Chicago at Illinois**  
Bioinformatics Training Certificate Program (BiTmaP), 2007

**Rivier College, Nashua, NH**  
Masters Degree candidate in Computer Science, 3.4 GPA.

**Amherst College, Amherst, MA**  
BA mathematics magna cum laude. Phi Beta Kappa, Sigma Xi, A average.

## References

Available on request.