

Mitzi Morris

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Skills

Areas of Expertise Natural Language Processing, Lucene/Solr Search, Bioinformatics

Programming Languages Java: 10+ years experience, C/C++: 7 yrs, Python: 2 yrs, R: 2 yrs, Javascript 1 yr.

Positions

2012	Contractor	AT&T Research, Florham Park, NJ Implemented product search for mobile shopping platform backend to RESTful API using Lucene/Solr to index RDF tuples of schema.org product microdata and JQuery for autocomplete and search suggestions.
2011 – 2012	Research Scientist / Software Engineer	Department of Biomedical Informatics, Columbia University, New York, NY Wrote Java programs to find mentions of diseases and symptoms in free text medical notes using Lucene for search and indexing and a MySQL database to aggregate results.
2009 – 2011	Research Scientist / Software Engineer	Center for Genomics and Systems Biology, New York University, New York, NY Analyzed very large datasets from genomics experiments, up to 100M items per set. Used Java for data analysis, R for visualization, and Python for pipeline integration.
2008	Software Engineer	Alias-i, New York, NY Created Java tool for indexing and storage of related bio-medical databases including MEDLINE and EntrezGene. Used Lucene to index text, LingPipe to find gene names, MySQL database to cross-reference gene names and MEDLINE articles.
2006 – 2007	Software Engineer	Epigenomics Lab Columbia University, New York, NY Wrote Java programs, R scripts, and MySQL databases for analysis, visualization, and storage of large datasets from high-throughput genomics experiments.
2005	Software Engineer	Buzzmetrics, New York, NY Wrote Java programs to store blog feeds and content in a MySQL database.
2002 – 2004	Research Scientist / Software Engineer	Columbia Genome Center Columbia University, New York, NY Developed programs and databases for Geneways a system to extract gene interactions from biomedical articles. Wrote Java Swing GUIs, Oracle databases.
2001	Software Engineer	Pearson Education, New York, NY Wrote Java applications to manage online courseware.
1999-2000	Software Engineer	New York Times Company Digital Wrote Java programs to translate newsfeeds from proprietary data formats into XML. Revamped www.nytimes.com by e-mail infrastructure in Java with Oracle database.

Positions, continued

- 1997-1998** **Director of Quality Assurance and Testing** **Viacom, New York, NY**
- 1993-1997** **Software Engineer** **NOMOS, Pittsburgh, PA**
Developed software in C and C++ for radiation therapy treatment planning.
- 1990-1993** **Research Programmer** **Carnegie Mellon University, Pittsburgh, PA**
Designed and implemented software in C for annotation of natural language corpora.

Publications

Integrative analysis of the *Caenorhabditis elegans* genome by the modENCODE project.
Science. 2010 Dec 24;330(6012):1775-87.
PubMed PMID: 21177976

Genomic surveys by methylation-sensitive SNP analysis identify sequence-dependent allele-specific DNA methylation.
Nature Genetics. 2008 Jul;40(7):904-8.
PubMed PMID: 18568024

GeneWays: a system for extracting, analyzing, visualizing, and integrating molecular pathway data.
Journal of Biomedical Informatics. 2004 Feb;37(1):43-53.
PubMed PMID: 15016385

Online Articles

LingPipe Tutorial *Database Text Mining*
<http://alias-i.com/lingpipe/demos/tutorial/db/read-me.html>

LingPipe Tutorial *Sentence Detection*
<http://alias-i.com/lingpipe/demos/tutorial/sentences/read-me.html>

LingPipe Blog *Lucene Tutorial updated for Lucene 3.6*
<http://lingpipe-blog.com/2012/07/05/lucene-tutorial-updated-for-lucene-3-6>

LingPipe Blog *Updating and Deleting Documents in Lucene 2.4: LingMed Case Study*
<http://lingpipe-blog.com/2008/11/05/updating-and-deleting-documents-in-lucene-2-4-lingmed-case-study>

Education

- Coursework in Statistics Columbia, NYU
- Coursework in Computer Science, Mathematics Carnegie Mellon University
- M.A. in Linguistics University of California at Santa Cruz
- B.A. French with Honors University of Michigan