

Amanda Birmingham

abirming@gmail.com

(303) 818-8789

COMPUTER SKILLS

Substantial experience with:

C#	VB.NET/6.0	LINQ	Python	JavaScript	SQL	HTML
XML	XSL/XSLT	CSS	SVG	SSI	Visio	MS Office
BLAST	SQL Server	Visual Studio	NUnit	Team Foundation Server		Windows

Experience with:

C/C++	Perl	ASP.NET	Java	FORTTRAN	Bioconductor	R
Photoshop	Illustrator	Apache	IIS	SharePoint	Weka	Unix

WORK EXPERIENCE

Thermo Fisher Scientific, Lafayette, CO

- Bioinformatics Manager (2006 - Present)
 - Led Bioinformatics team for Genomics division, directing five junior and senior developers
 - Hired team members, supervised remote employees, and handled intra-team conflicts
 - Mentored junior supervisors and actively promoted employees' professional development
 - Worked directly with largest customers to provide expert analysis services and support
 - Directed industry-academic collaborations leading to high-profile publications
 - Represented company publicly through invited conference talks and seminars
 - Championed public data standards and data sharing through community-wide MIARE guidelines and partnership with NCBI's BioAssay database
 - Developed novel classifiers for gene silencing behaviors using machine learning techniques
 - Created first-in-class simulation software to permit previously-infeasible comparison of statistical analysis techniques for genome-wide screening experiments
 - Instituted unit-testing, source branching, and peer code reviews to ensure software quality
 - Continued to perform bioinformatics software developer duties
- Bioinformatics Software Developer (2004 - 2006)
 - Developed custom software to design company's flagship gene silencing products using C#, VB.NET and ASP.NET in Visual Studio
 - Parallelized product design code and infrastructure, increasing performance by 300%
 - Executed and published novel research on silencing specificity, leading to new products
 - Performed extensive capture and curation of public data from NCBI, EMBL, and miRBase

Professional Research Assistant, University of Colorado Molecular, Cellular, and Developmental Biology Dept., Boulder, CO (2002 - 2004)

- Co-developed BayesFold (<http://bayes.colorado.edu/fold>), an RNA structure prediction package
- Wrote first-in-class software to design primers for SELEX (<http://bayes.colorado.edu/pps>)
- Designed, administered, and analyzed a web-based study on RNA similarity principles
- Created team development tools, including standardized error handling and a JavaScript profiler
- Conducted user interviews and testing to gather requirements and evaluate prototype designs
- Provided local and remote software support and wrote comprehensive end-user documentation

Elity Systems, Inc., Somerset, NJ

- GUI Team Leader (2000 - 2001)
 - Headed User Interface team, directing a team of six junior and senior developers
 - Awarded first annual Elity Value Award
 - Performed all stages of project planning, including requirements gathering, feasibility assessment, task scoping, and resource allocation
 - Worked directly with customers on-site and remotely for specifications identification, product installation, training, and technical support
 - Assessed resumes, conducted interviews, and made hiring recommendations
 - Administered disciplinary action up to and including termination when necessary
 - Trained new hires and interns, and prepared both internal and external training materials
 - Designed and enforced GUI coding and usability guidelines
 - Continued to perform senior software developer duties
- Senior Software Developer (2000)
 - Created multi-tiered web-based GUIs for a rules-based CRM software product using HTML, ASP, VB, and SQL Server
 - Wrote substantive web applications using XML, XSLT, and JavaScript
 - Designed and implemented schema of multiple sections of product's database
 - Wrote both internal and end-user product documentation
- Software Developer (1999 - 2000)
 - Built custom installer software using C, VB, and Windows API
 - Created Excel-based reporting programs incorporating VBA, VB, and ASP
 - Wrote Perl scripts to generate test data sets

Research Assistant, University of Massachusetts Astronomy Dept., Amherst, MA (1998 - 1999)

- Carried out computer-based data analysis to investigate modes of stellar formation
- Wrote programs in C and Perl to sort, perform calculations on, and display large data sets

Internships

- Arecibo Observatory (Arecibo, PR; Summer 1997)
- Cornell University, Dept. of Astronomy (Ithaca, NY; Summer 1995)
- Amherst College, Dept. of Physics: Hughes Fellow (Amherst, MA; Summer 1994)
- NASA Lewis Research Center, Electrophysics Branch (Cleveland, OH; January 1993)

EDUCATION

Colorado State University, Fort Collins, CO (2006) Department of Statistics

- Statistics for Engineers and Scientists (grade: A+)

University of Colorado, Boulder, CO (2003) Department of Computer Science

- Graduate courses: Readings in Cognitive Science, User Interface Design (grades: A)

Amherst College, Amherst, MA (1997)

- Summa Cum Laude Bachelor of Arts in Physics, Astronomy, and English; GPA: A
- Awarded Phi Beta Kappa Society membership and Amherst College Porter Prize for Astronomy
- Senior honors thesis with High Distinction in Astronomy

Olmsted Falls High School, Olmsted Falls, OH (1993)

- Valedictorian, National Merit Finalist, recipient of state Robert Byrd Scholarship

References available upon request