

# Jeffrey D. Allen

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## TECHNICAL SKILLS

### LANGUAGES (IN ORDER OF FAMILIARITY):

Java, PHP, R, XML, JavaScript, C++, C, CSS, Perl, ActionScript, Python, C#, ML  
DATABASES: MySQL, Oracle, PostgreSQL, MS SQL Server  
OPERATING SYSTEMS: Microsoft Windows (3.1 - Windows 7), Linux (SUSE, Fedora)

## PROJECT FIELDS

Bioinformatics & Biostatistics  
Web development — often AJAX-enabled sites; developed in the LAMP stack  
Information retrieval & data mining  
Algorithm analysis & engineering  
GUI Design & implementation  
Server maintenance — software and hardware  
Circuit design & analysis — primarily in Verilog

## EDUCATION,

### PROJECTS, AWARDS

MS GPA: 4.0

#### MS Computer Science

Southern Methodist Uni.  
May 2010 (exp.)

Developing a thesis about using machine learning to classify and identify users based on their typing signature. Developed a biometric algorithm to authenticate users based on the way the users type their password — as opposed to merely the sequence of characters entered. Coursework emphasized databases, information retrieval, algorithm design, and biometrics.

#### BS Computer Science

Southern Methodist Uni.  
May 2010 (exp.)

BS GPA: 3.5

Coursework focused on bioinformatics, programming languages and practices, etc.

#### Outstanding Physics TA

SMU — December 2008

Selected as the outstanding TA in the physics department across all laboratory sections. Worked for two semesters in Electricity & Magnetism as well as Mechanics labs.

#### Publications

Journal of Cancer Science & Therapy

Jeffrey D Allen, Min Chen, Yang Xie. Model-Based Background Correction (MBCB): R methods and GUI for Illumina bead-array data. *Journal of Cancer Science & Therapy*, 2009.

#### 1<sup>st</sup> Place - Best

#### Implementation

ACM UIST Symposium  
October 2009

Competed in an international student innovation contest against 38 other teams including groups from Harvard, MIT, etc. Won with *Safelock*, a biometric, pressure-sensitive keystroke dynamics algorithm.

## EXPERIENCE

#### UT Southwestern

#### Medical Center

2007—Present

Led programming efforts coming out of UT Southwestern's Biostatistics department. Developed MBCB, an R package which improves upon current microarray background correction and normalization techniques.

Undertook a broad variety of technical work: development work on a gene expression database with a custom web front-end; extensive experience with reverse-engineering gene dependency graphs from microarray data; worked on a multi-thousand user, e-commerce web system.

#### Aava Technology

2008—Present

Developed an internal timesheet management system based on an open-source program to simplify and automate billing and time-tracking within the company. Setup and maintain bug-tracking software.

Exposure to mobile software development (iPhone).

#### Personal/Freelance

2000—Present

Pursued web development and other programming projects individually. Currently administrating multiple servers (Windows Server 2008, Fedora Linux); personally responsible for setup, installation, and maintenance. Host a variety of services: RDP, SSH, FTP, Apache HTTP, Subversion, etc.