# Gayle L. McDowell

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## Employment

**Software Engineer, Intern** **Apple Computer** **Summer 2004**

iChat AV

- Reduced time to render the user's buddy list by 75% by implementing prediction algorithm.
- Implemented iChat integration with OS X Spotlight Search by creating tool which extracts metadata from saved chat transcripts and provides metadata to a system-wide search database.
- Redesigned chat file format and implemented backwards compatibility for search.

**Lead Student Ambassador** **Microsoft Corporation** **Fall 2003 – Spring 2005**

- Promoted to Lead Student Ambassador in Fall 2004; supervised 10 – 15 Student Ambassadors.
- Created and taught Computer Science course, CSE 099: Software Design and Development.

**Head Teaching Assistant** **University of Pennsylvania** **Fall 2001 – Spring 2005**

- Courses: Advanced Java III, Software Engineering, Mathematical Foundations of Computer Science I & II.
- Promoted to Head TA in Fall 2004; led weekly meetings and supervised four other TAs.

**Software Design Engineer, Intern** **Microsoft Corporation** **Summers 2001 – 2003**

Visual Studio Core (Summer 2003)

- Implemented a user interface for the VS open file switcher (ctrl-tab) and extended it to tool windows.
- Created service to provide gradient across VS and VS add-ins. Optimized service via caching.

Programmer Productivity Research Center (Summers 2001, 2002)

- Built app to compute similarity of all methods in a code base; reduced time from $O(n^2)$ to $O(n\ log\ n)$.
- Created test case generation tool which creates random XML docs from XML Schema.

## Education

**Philadelphia, PA** **University of Pennsylvania** **Fall 2000 – May 2005**

- M.S.E. in Computer and Information Science, May 2005. GPA: 3.6
- B.S.E. in Computer Science Engineering with Minor in Mathematics, May 2005. In-major GPA: 3.4.
- Graduate Coursework: Software Foundations; Computer Architecture; Algorithms; Artificial Intelligence; Comparison of Learning Algorithms; Computational Theory.
- Undergraduate Coursework: Operating Systems; Databases; Algorithms; Programming Languages; Comp. Architecture; Engineering Entrepreneurship; Calculus III.

## Technical Experience

### Projects

- **Multi-User Drawing Tool** (2004). Electronic classroom where multiple users can view and simultaneously draw on a "chalkboard" with each person's edits synchronized. C++, MFC
- **Synchronized Calendar** (2003 – 2004). Desktop calendar with globally shared and synchronized calendars, allowing users to schedule meetings with other users. C#.NET, SQL, XML
- **Operating System** (2002). UNIX-style OS with scheduler, file system, text editor and calculator. C

## Languages and Technologies

- C++; C; Java; Objective-C; C#.NET; SQL; JavaScript; XSLT; XML (XSD) Schema
- Visual Studio; Microsoft SQL Server; Eclipse; XCode; Interface Builder