

CIERA NICOLE CHRISTOPHER

SOFTWARE ENGINEER

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WORK EXPERIENCE

Static Analysis Engineer **eBay** **May 2006 – Aug. 2006**

Static analysis engineer for eBay Marketplaces

- Ran a cost-benefit analysis of static analysis tools, including Fortify, Klokwork, Daikon, and Fluid
- Created a process for managing static analysis tools within eBay's intricate and tightly controlled software lifecycle
- Implemented the tool management process by integrating FindBugs into the eBay development and SQA cycles

Team Lead/Developer **Vizolutions, Inc.** **Aug. 2004 – June 2005**

Team lead and developer on a CMS for Web Associates

- Ported Web Associates's CMS from EJB to .NET
- Architected the database layer and wrote key utilities and modules on the web layer
- Created a process that allowed our 10 person team to separate core functionality from vendor specific functionality

Program Manager **Microsoft** **June 2003 – Aug. 2003**

Intern Program Manager on Visual Studio Tools for Office (VSTO)

- Wrote full specifications for two new features
- Carried out a usability study, reported the data, and presented suggestions to improve VSTO
- Wrote three mini-specs for controversial features and gained team consensus on solutions

Project Lead/Developer **Vizolutions, Inc.** **May 2001 – May 2003**

Project lead of a Java Swing project that surveys oil wells for Applied Technology Associates

- Filtered, merged, and prioritized feature requests from three user classes
- Organized releases and decided if patches should be sent out

Developer on a Java Swing project

- Designed and implemented over 30,000 lines of safety critical code in a 100,000 line application
- Tested teammate's code through code reviews, automated test scaffolds, and black-box testing
- Received bugs from a world-wide field and debugged them using software and hardware log files

Developer on a mature MFC project

- Developed functionality that computed user-defined algebraic functions on generic data sets
- Maintained a drag and drop dialog that assisted a user in creating an oil drill-string

EDUCATION

Grad. Student in Software Eng. **Carnegie Mellon University** **2005 – Current**

Student in Software Engineering Ph.D. Program

- Advisor: Jonathan Aldrich

Current research: Static Analysis of Framework Usage

- Investigating the constraints that frameworks place on applications
- Designing a specification language to describe these constraints
- Creating static analysis to assure that applications meet the framework's constraints

B.S. in Software Eng. **California Polytechnic University** **2000 – 2005**

B.S. in Software Engineering, June 2005

- Major GPA: 3.82
- Cumulative GPA: 3.78

Senior Project

- Part of a three person team that created software to manage a rock climbing wall
- Wrote the user interface in Swing and worked with a Hibernate and MySQL backend
- Implemented the AI component which creates new climbing routes and rates existing climbing routes using a k-nearest neighbor algorithm

Upper Division Software Engineering Series

- Worked on a year long project for Brocade to automatically test their CIMOM implementation
- Managed four upperclassmen during the initial requirements phase
- Directed five lowerclassmen through the development and testing phases

Graphical User Interfaces

- Wrote a two-person Othello game in C++/MFC and in Java/Swing
- Implemented an AI for the game that used the min-max algorithm with alpha-beta pruning
- Designed the AI to support many games such as othello, chess, and mancala

Operating Systems Series

- Wrote a system call which manipulated the scheduling algorithm of the 2.6 Linux kernel
- Performed detailed analysis of how using the call affected the performance of other processes
- Created a kernel loadable module to send and receive encrypted voice signals

HONORS AND ACTIVITIES

- J.L. Moore Fellowship recipient 2005-2006
- Wal-Mart Competitive Edge Scholar 2000-2005
- Accenture Outstanding Junior in Computer Science May 2003
- Rock climber, currently climbing V1/2 level 2003-Current
- Ballroom dancer, currently at Bronze level 2000-Current