# Paul Corazza

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# Overview

I have been building Java and web applications for 15 years, with a depth of experience in every phase of the lifecycle. In my background, I have built large components for enterprise-level systems and have also worked on much smaller projects in which a small team handled all the phases of the lifecycle. I have certifications in Java and have taught software engineering and algorithms at the graduate level for 10 years. I have good analytical skills (Ph.D. in mathematics) and excellent design skills. In the past 4 years, I have spent 1½ years as a Google engineer, 6 months as an E-Trade architect, and 2 years as a graduate-level professor of computer science. Skills/technologies of interest: Java, JEE, JavaScript, AJAX, jQuery, MySql, Spring, Hibernate, Web Services, Axis2, XML, Protobuffers, UML, RUP, JMS, Jess (and other business rules languages), Maven, Ant, Blaze, Perforce with skills in Localization technologies. I have specialty skills in the area of Rules Engines – I have built rules engines from scratch (creating a custom rules language) and also using Jess.

## Education

BA, 1978, Maharishi International University, Fairfield, IA

MS, 1981 Auburn University, Mathematics, Auburn, AL

PhD, 1988 Auburn University, Mathematics, Auburn, AL

Post-Doc – Van Vleck Assistant Professorship at University of Wisconsin, 1987-1990

# Certifications

2007 - BrainBench certification in Java2 (master level) and J2EE (standard level)

1999 - Sun-certification in Java programming, (JDK 1.1)

## Work Experience (full-time)

#### Associate Professor of Mathematics and Computer Science

2/2012 - present, Maharishi University of Management, Fairfield, IA

 Taught grad courses in Computer Science and undergraduate courses in mathematics. See descriptions in paragraphs below.

# Java Engineer / Architect

2/2011 – 8/2011, E\*Trade, Menlo Park (contract with Tek Systems)

 Designed and implemented the first phase of a localization solution for E-Trade web applications. The biggest part of this work was to design and implement in the current E-Trade framework the necessary infrastructure to support *localized widgets*. This required development of maven plug-ins and modification of the maven build process; Spring controller development; and JavaScript/jQuery design and development in a custom framework. Provided extensive documentation for use by developers (users of the localization framework).

## **Localization Engineer**

1/2010 – 1/2011, Google, Mountain View (contract with CDI)

Developed Java web applications and other tools to support internal localization business processes. Technologies used: Spring framework for an application to support viewing and editing data related to translation projects; jQuery was used to support the JavaScript-based front-end. Several projects made use of Google's RPC mechanism (called "Stubby") which uses protobuffers (rather than XML) as the data exchange format. Several applications made use of Axis2 for SOAP clients (Web Services) for a web-based task- and bug-tracking tool. Projects used Java, JavaScript (using jQuery as the main library), CSS, and Python. Also mentored less experienced engineers and gave two short formal trainings – one on JavaScript, the other on XML.

## Associate Professor of Computer Science (Master's Degree Program)

1/2009 – 1/2010, Maharishi University of Management, Fairfield, IA

• Taught graduate-level courses in Computer Science. Main courses were: Algorithms, Software Engineering, a seminar on Rules Engines (all of which were presented using Java as the primary language), and a first course on Java programming, data structures, and OOAD. In 2009, I videotaped these courses for use in the Distance Education program. Software Engineering covers best practices, design patterns, software architecture, development process (RUP and Agile), and inversion of control as implemented in the Spring framework; also worked with MySql database, JUnit for testing, Emma for coverage analysis, Ant for the build process, JavaScript for scripting. In Algorithms, covered worst-case and average case analysis of classical problems (sorting, searching, selection, graph problems and NP-hard problems); studied RSA security algorithm and public-key cryptography; optimized binary search trees, such as red-black and splay trees; and other useful data structures, such as priority queues, skip lists, sets, tree-sets, and hashtables.

#### Senior Java Engineer

7/2008 – 12/2008, Google, Mountain View, CA (contract with NexGen)

 Part of a team ("GUTS") that rewrote and enhanced an internal email system for handling trouble tickets for field agents. Used Apache James, JavaMail api, Java api to Remedy system. Coding was in Java, retooling an old Python program. Other tools: perforce change management, blaze and Ant build process, Emma (for monitoring unit testing), Remedy and its Java API, Apache James.

## Associate Professor of Computer Science (Master's Degree Program)

8/2004 - 6/2008, Maharishi University of Management, Fairfield, IA

 Taught graduate-level courses in Computer Science. Main courses were: Algorithms, Software Engineering, a seminar on Rules Engines, in a Java context, and a remedial course on Java programming.

## Senior Systems Analyst

4/2002 - 8/2003, Mutual of Omaha, Omaha, NE

Main responsibility was to build a standalone Java/XML based Rules Engine for managing and executing Mutual's business rules as part of an implementation of E.piphany's E.Service application. Also developed skill in working with the E.piphany CRM product, and created Java extensions that allowed it to communicate with my Rules Engine. To create the Rules Engine, I started from scratch, spending a month making a business case for this component of the application, spending several months gathering user requirements and then incrementally building the rules engine based on a custom self-documenting rules language (which I designed) that would permit a business user to update or create new rules without relying on programmers and without interrupting the CRM service.

# **J2EE Corporate Trainer**

7/2002 - 4/2003, Onsite Seminar and Unix Trainer, Fairfield, IA

- Gave Java/J2EE trainings in-house for various companies in the US. Courses Taught:
  - (1) 5-day course on WSAD and EJBs
  - (2) 5-day course on WSAD, Servlets, JSP, and Server-Side development
  - (3) 4-day course on WSAD 5.0, Servlets, JSP, WebSphere server
  - (4) 3-day course on WSAD and Migration (co-taught)

## **Assistant Professor of Mathematics**

8/2000 - 7/2002 Boise State University, Boise, ID

 Taught undergraduate mathematics and computer science, and furthered my mathematics research (several conference presentations, and research leading to several publications). I taught several courses on Java (JDK 1.1) in a Linux environment during this time.

## Java engineer and system designer

7/1999 - 7/2000 Fireman's Fund Agribusiness, Austin, TX

• Built premium-calculator as a component for a large online farm-insurance application, and also built a complex rating engine for an auto insurance application.

#### Java engineer

9/1996 - 7/1999 Telegroup (now, Primus), Fairfield, IA

Helped to write and design a customer-facing order-entry application for telephone service. A major
part of the work included refactoring the architecture as the application matured, and building a simple
rules engine to manage the business rules of the company.

# Work Experience (part-time during periods of academic employment)

#### Java engineer

7/2006 - present, Independent contractor

o Designer and implementer of several small web applications using JSPs and servlets. Samples:

http://mothermeera-fairfield.com/ http://mothermeera-fairfield.com/Main/bookstore2/bookstore-home.jsp (shopping cart disabled)

## Java engineer

5/2006 - 10/2006, Core Plus Mathematics Project

• Helped to create applets in a JNLP context that visually portray mathematical ideas for high school students in the areas of geometry, algebra, and discrete mathematics. See an example of my work

at: http://pcorazza.lisco.com/coreplus/applet.html

## Web developer

2002 – 2003, Web designer for small Law Firm

 Used HTML, JavaScript and server-side scripting to create an order-entry form for users of a set of law services

#### Courseware developer

12/1998, High-Tech Systems

o Developed JDK 1.1 Java courseware for a corporate training service

#### Java engineer

12/1997, Telegroup

 Small contract to develop applets and a UI computing and displaying cost/benefit analysis for certain services provided through the Sales department

#### Professor

9/1993 – 6/1994, Indian Hills Community College, Ottumwa, IA

 Taught (on a part-time basis) several courses: BASIC programming, Intro to Data Structures, and Intro to Statistics

## Consultant

8/1992 - 12/1992 Bell Labs, R&D

Studied and reported on several research problems of interest to the company at that time. Analysis only.

## Skills

Skill Name	Skill Level	Last Used/Experience
<ul> <li>Analysis of algorithms</li> </ul>	Expert	Currently used/6
<ul> <li>Apache James email server</li> </ul>	Expert	Currently used/1
<ul> <li>Communication/Documentation</li> </ul>	Expert	Currently used/10
<ul> <li>CSS</li> </ul>	Intermediate	Currently used/4
<ul> <li>DB2</li> </ul>	Intermediate	3 years ago/1
<ul> <li>Eclipse / WebSphere</li> </ul>	Expert	Currently used/10
■ EJB	Intermediate	5 years ago/1
<ul> <li>Hibernate</li> </ul>	Intermediate	1 year ago/1
<ul> <li>HTML</li> </ul>	Expert	Currently used/12
<ul> <li>Insurance Industry</li> </ul>	Experienced	Several projects
■ Java	Expert	Currently used/15
<ul> <li>Java API for Remedy</li> </ul>	Expert	Currently used/2
<ul> <li>Java Applets</li> </ul>	Expert	2 years ago/12
<ul> <li>Java extensions for E.piphany</li> </ul>	Expert	7 years ago/1

<ul> <li>Java Swing</li> </ul>	Intermediate	1 year ago/10
<ul> <li>JavaScript</li> </ul>	Expert	Currently used/12
<ul> <li>jQuery</li> </ul>	Intermediate	Currently used/2
<ul> <li>JDBC</li> </ul>	Expert	Currently used/13
<ul> <li>Jess Rules Language</li> </ul>	Expert	1 year ago/5
■ JSP	Expert	Currently used/6
<ul> <li>Leadership</li> </ul>	Expert	1 year ago/6
<ul> <li>Linux O/S</li> </ul>	Expert	Currently used/10
<ul> <li>Maven</li> </ul>	Intermediate	Currently used/1
<ul> <li>MySql</li> </ul>	Expert	Currently used/8
PHP	Expert	1 year ago/1
<ul> <li>Python</li> </ul>	Intermediate	1 year ago/1
<ul> <li>RUP</li> </ul>	Expert	Currently used/6
<ul> <li>Servlets</li> </ul>	Expert	Currently used/7
<ul> <li>Shell scripting</li> </ul>	Intermediate	Currently used/3
<ul> <li>Spring IoC and MVC</li> </ul>	Intermediate	Currently used/1
<ul> <li>SQL</li> </ul>	Expert	Currently used/12
<ul> <li>TDD</li> </ul>	Expert	Currently used/7
<ul> <li>Technical Writing</li> </ul>	Expert	Currently used/10
<ul> <li>TopLink (ORM tool like Hibernate)</li> </ul>	Expert	10 years ago/1.5
<ul> <li>Training (Java, JEE, OOAD, Algorithms)</li> </ul>	Expert	1 year ago/5
<ul> <li>UML</li> </ul>	Expert	Currently used/10
<ul> <li>Windows O/S</li> </ul>	Intermediate	Currently used/12
<ul> <li>XML</li> </ul>	Expert	Currently used/6

# References

Reference Name	Phone	Email	Type of Reference
<ul> <li>Annie Li</li> </ul>	408-806-7238	annieji.li@etrade.com	Professional (E-Trade Manager)
<ul> <li>Jose Fernandez</li> </ul>	650-214-4241	jfernandez@google.com	Professional (Google Manager)
<ul> <li>Katie O'Rourke</li> </ul>	+353 1 543 5124	katieor@google.com	Professional (Google Manager)
<ul> <li>Philip Lo</li> </ul>	408-203-4239	philipl@google.com	Professional (Google colleague)
<ul> <li>Keith Levi</li> </ul>	641 470 1363	levi@mum.edu	Professional (Department Chair)