Jim Crossley

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Objective

To build beautiful things; to strike a practical balance between simplicity and utility; to develop services, frameworks and components that are useful, robust, adaptive and understandable; to advance open standards and open-source software.

Skills

- *Object-Oriented Development*
  Design Patterns (both GoF and J2EE), Unified Modeling Language (UML), Use Cases, Test-driven development, Refactoring
- *Web Technologies*
  HTTP, XHTML/CSS, Struts/Tiles, Spring, Ruby On Rails
- *Java (9+ years)*
  J2EE (JMS, EJB, JMX, JNDI, JDBC, Servlets/JSP), Jakarta Commons (HttpClient, Logging, Lang, BeanUtils, Validator, Digester), Jini
- *XML*
  XSLT/XPath, dom4j, JDOM, Jelly, VoiceXML
- *Continuous Integration*
  Maven, Ant, Make, JUnit, XDoclet, CruiseControl, Anthill
- *Server Administration*
  Linux (Gentoo, Redhat, Knoppix, Mandrake, Debian), Apache (mod_rewrite), JBoss/Jetty/Tomcat, Websphere, VoiceGenie, VMware
- *Revision Control*
  Perforce, Subversion, CVS, PVCS, Starteam
- *Databases*
  Oracle, MySQL, DB2
- *C++ (3+ years)*
  Standard Template Library (STL), Adaptive Communication Environment (ACE), The ACE ORB (TAO), Rogue Wave [DB]Tools.h++
- *Miscellaneous*
  Emacs, Ruby, Perl, Python/Jython, Grinder, ssh/rsync/bash, CORBA, MapInfo

Experience

CPT International, Inc. -- Marietta, GA   **(02/03-Present)**
Senior Technical Advisor
Responsible for the establishment of effective web infrastructure, development best practices, and knowledge transfer through research, collaboration, mentoring, and training. Introduced and encouraged the use of collaborative tools such as Wiki, Maven, Perforce and Anthill.

Projects:

- Developed a highly sophisticated automated testing framework for speech-enabled VoiceXML applications, capable of both functional and stress testing. The service would compile scripts written in a simple DSL into VoiceXML, place the outbound calls on a clustered VoiceGenie gateway and tabulate the results. It included a web proxy component that would dynamically "decorate" audio files with specific DTMF tones when requested by the application under test, enabling the testing application to "hear" expected prompts in response to specific inputs, e.g. DTMF, TTS, or audio files. The entire application was written in Ruby.
- Led the design and development of middleware to facilitate the exchange of data with 3rd-party web sites. The service provided a very simple Java API enabling access to vendor or customer databases exposed via any text-based HTTP interface, including SOAP, XML-RPC, and HTML. Encapsulating the transformations of the clients' requests and subsequent responses using XSLT stylesheets, the project utilizes many best-of-breed open source tools including HttpClient, JTidy, and dom4j.
- Developed a robust application of common Linux utilities (ssh, rsync, at) to automate scheduled software distribution, configuration changes and production deployments to various secure networks of Linux machines.
- Implemented a DMZ-style web architecture for hosting customer voice applications. Used clustered Apache nodes as SSL accelerators and reverse proxies to a JBoss/Jetty app server cluster, providing secure, efficient access to various resources, including VoiceGenie VoiceXML gateways and MySQL databases. Proved the performance using the Grinder load-testing framework.
- Championed the conversion of internal source code control system from Starteam to Perforce after extensive evaluation of multiple SCM products. Led the effort to port the existing codebase and established administrative policies and procedures resulting in a more streamlined project lifecycle and minimal dependence on sys-admin personnel.

Equifax, Inc. -- Alpharetta, GA   **(07/02-01/03)**
Senior Developer
Co-led a team responsible for the reengineering of existing mainframe processes into a more automated and distributed web-based framework to support the delivery of customized credit marketing data. Initial prototype allowing web clients to retrieve counts of people matching various demographic criteria was developed using Struts, Tiles and JBoss. The prototype was deployed against a one percent sample of 288 million credit records in an Oracle 9i database.

iFleet, Inc. -- Roswell, GA   **(06/94-06/02)**
Senior Engineer
Responsibilities included the design, development and deployment of large-scale, distributed systems, most to serve the special needs of inbound call centers; the evaluation of new technologies resulting in recommendations relevant to our customers' requirements; the establishment of standards and best practices for development teams; the mentoring of junior staff.

Projects:

- Developed the business objects to support multiple J2EE Struts-based applications deployed using the Struts JSP application framework, including a means for locating the service providers closest to a particular geocoded location, and a tool for selecting roadside incident data matching various criteria stored within a legacy AS/400 DB2 database. (02/01-06/02)
- Combined the Jetty embedded web server and the JDOM document manipulation packages to form a framework for defining applications in terms of services that pass XML data back and forth via HTTP. (09/00-01/01)
- Developed an Accounts Payable interface between a web-based application used for dispatching automotive service providers and the J.D. Edwards' One World accounting system. (02/00-08/00)
- Built a framework to simplify the implementation of the Metadata pattern; to create, edit, and query for dynamic attributes of business objects. (04/00-06/00)
- Designed and developed a proprietary object-relational persistence layer. (08/99-09/00)
  - Transparently mapped business objects to tables in an Oracle RDBMS using the Java Reflection API to encapsulate the dynamic construction and execution of the SQL statements necessary to retrieve, save, and delete those objects.
  - Provided robust support for parent-child relationships -- both aggregation and association -- including automatic cascading saves and deletes of corresponding rows linked by direct foreign key or intermediate association table.
  - Combined Sun's Jini and Oracle's Advanced Queueing libraries to form a distributed cache of replicated business objects, synchronizing the JVM's using Jini event notifications when the state of any cached object changed.
  - Featured built-in support for the automatic management of concurrent access to the persistent objects using an optimistic locking strategy.
- Data Access Resource Manager (06/97-05/99)
  - Co-designed a proprietary Interface Definition Language (IDL) and C++ application framework which simplified the development of peer-to-peer and client-server components that created, sent and received complex data structures comprised of STL containers.
  - Managed stateful, concurrent access to multiple Oracle database instances, using Rogue Wave DBTools.h++ to invoke one or more SQL stored procedures within a single transaction corresponding to a client's method call.
  - Efficiently spread load across distributed processes, each with its own dynamically-configurable pool of operating system threads and database connections.
- Created a user-friendly wizard with Visual Basic for subscribing members to various roadside assistance and monitoring programs; also enhanced NT-based resource management components of a vehicle monitoring system using Visual C++ (1/97-5/97). (01/97-05/97)
- On-site consultant with Ceridian Corporation during the development of

their Human Resources and Payroll application. (06/94-01/97)
- Created the installation program for the application using InstallShield.
- Adapted the chosen visual application development tool, Revelation Technologies' OpenInsight, to the MS-Windows printing API.
- Developed an API for generating simple dialog boxes at runtime.
- Created a hierarchical "tree control" for the OpenInsight environment.

Access Consulting, Inc. -- Marietta, GA   **(02/91-05/94)**
Consultant
Configured, enhanced, and maintained various installations of the ADD+ON Business Basic commercial application suite. Worked closely with clients in retail, wholesale and manufacturing industries to evolve their software as their business grew.

Education   *Georgia Institute of Technology*   **June 1987**
Bachelor of Industrial Engineering

Supplemental education includes 5 full-time quarters (6/90-8/91) of Computer Science courses at Southern Polytechnic University in Marietta, GA, as well as 3 full-time quarters (8/91-3/92) of graduate-level Computer Science courses at Georgia Tech emphasizing the practical application of Artificial Intelligence.