

# Taylor Christopher Venable

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<http://metasyntax.net/about/resume.html>

## Career Objective

To obtain a challenging and rewarding position as a programmer or system administrator for a business which seeks a professional, reliable, and creative software engineer or Unix system maintainer.

## Formal Education

- **Purdue University:** West Lafayette, IN / Fort Wayne, IN  
Bachelor's of Science in Computer Science, May 2008.

## Employment Experience

- **IPFW:** Fort Wayne, IN – <http://ipfw.edu/>  
Service application administration and glue programming, 2011-02-21 – present.  
Indiana University, Purdue University Fort Wayne is a smaller (approximately 15,000 students) combination of both Purdue University and Indiana University located in Fort Wayne. I am one of seven programmers responsible for maintaining existing systems and developing new ones. I have completely revamped our process of refreshing data in our pre-production environment from production. I have also written several pieces of critical glue infrastructure to facilitate our migration to a new major version of our learning management system, Blackboard.
- **Symantec:** Fort Wayne, IN – <http://www.symantec.com/>  
Server-side application programming & testing, 2010-08-09 – 2011-02-18.  
The SSL and authentication business unit of VeriSign was acquired by Symantec as of 2010-08-09. All projects continued without interruption.
- **VeriSign:** Fort Wayne, IN – <http://www.verisign.com/>  
TrustBearer Labs was acquired by VeriSign as of 2010-04-01. Most projects continued with little interruption, and some new projects were begun.
- **TrustBearer Labs:** Fort Wayne, IN – <http://www.trustbearer.com/>  
Server-side application programming & testing, summer 2007 – 2010-04-01.  
TrustBearer Labs was a small company located in Fort Wayne specializing in software for interacting with smartcards and other trusted devices. The flagship TBLive product is a system (including Java service, web server libraries, client-side JavaScript, and a browser plugin) to enable the use of smartcards with web applications using a web browser and without costly and hard-to-manage middleware. Other major projects that TrustBearer provides include HealthID, a system for storing patient health information on a smartcard, and TBDesktop, a thick-client middleware application with support for many trusted devices.

## Professional Projects

### Current Employment

- **Blackboard Learn**  
Implemented two programs to filter and transform data emitted by our student information sys-

tem into a format that can be consumed by Blackboard Learn, our new learning management system. This involved lots of adaptive coding based on changing constraints; to keep pace I used Kawa Scheme to leverage the benefits of a dynamic development environment along with the ubiquity and performance of the JVM.

- **Pre-Production Refresh Process**

Completely rewrote the process by which we perform a refresh of data from our production systems, especially surrounding our directory services. The process before I arrived involved lots of manual intervention and could take two weeks or more. Now the process is mostly automated by Perl programs built around configuration files which are easy to change as requirements evolve and the process advances. Now refreshes can be completed in two days.

## Previous Employment

- **TrustBearer HealthID**

Designer and primary implementor of the TrustBearer system to store patient health information on a smart card, currently in a 250,000 patient deployment at Mount Sinai hospital system in New York. This product has received an endorsement from the American Hospital Association and is marketed together with an HL7 capture system by EXTENSION Inc. under the name "EXTENSION HealthID."

- **Build System (pkgBuilder)**

Implemented a universal (cross-language, cross-project, cross-platform) build tool that integrates testing, release engineering, and continuous integration features. This tool is used by all projects at TrustBearer, and continues to be used at VeriSign and Symantec.

- **TBLive Daemon**

Project manager of the Java-based system responsible for all server-side processing, including data storage and interfacing to third-party systems (such as an OCSP or an HL7 gateway). I am in charge of feature decisions on the various internal libraries involved, and of writing nearly all system documentation and tests.

- **Internationalization**

Conducted a thorough review of issues affecting internationalization in all TrustBearer components, modified the architecture of several projects to implement it, and wrote build system modules and an internationalization subsystem to facilitate localization efforts.

## Individual Projects

- **Vim**

Maintainer of the official Tcl syntax support, and author of many other non-official support files for languages such as BSD Make, Tensile, and Scheme (various modifications to support the nuances in specific implementations of my favorite programming language).

- **Tensile**

A tool for literate programming, which consists of a parser and output generator written in Lua and a L<sup>A</sup>T<sub>E</sub>X package which is used to help produce the typeset literate documentation. For more information please see <http://metasyntax.net/code/tensile.html>.

## Technical Experience

- **System & Application Development**

- Languages:

- \* Most Experience: Bourne Shell, C, Java, Lua, Perl, Scheme, Tcl

- \* Some Experience: C++, Common Lisp, Erlang, Haskell, OCaml, Python, Ruby

I also have knowledge of the syntax and semantics of many other programming languages, including Ada, Prolog, and Smalltalk. Programming languages and their implementations are one of my chief research interests.

- **Topics:** I have experience in developing complicated algorithms and data structures for intricate tasks, in parsing text and processing domain-specific languages and configuration systems, and in designing and implementing robust and fault-tolerant systems.

- **Server & Web Client Development**

- **Languages:**

- \* Most Experience: XHTML, CSS, PHP, Java Servlets

- \* Some Experience: XML, XSLT, JavaScript, SQL

- **Topics:** I am experienced in writing reasonably large Java services and in managing the various forms of complexity that arise in such systems. On the client side, I am familiar with all of the most widely used standards, including those which describe HTML, CSS, and JavaScript.

- **Development Tools**

- **Build Systems:** Ant, Make (BSD & GNU), Maven, pkgBuilder

- **Code Generation:** ANTLR, Lex & Yacc

- **Devel. Environments:** Eclipse, Emacs, NetBeans, Vim

- **Documentation:**  $\TeX$ ,  $\LaTeX$ , Doxygen, javadoc

- **Testing Frameworks:** JUnit, PyUnit

- **Version Control:** CVS, Darcs, Git, Mercurial, Subversion

- **System Administration** I have experience managing small to medium-sized installations of web-serving environments (namely Apache, Lighttpd, and Tomcat) in addition to other services such as Sendmail, CVS, Subversion, OpenSSH, and pf (the OpenBSD packet filter). I am proficient with common Unix tools including shell scripting, sed & awk, and Perl.

- **Operating Systems**

- BSD (FreeBSD, NetBSD, and OpenBSD)

- Linux (Arch, Debian, RedHat & Fedora, Slackware, and Ubuntu)

My system administration skills are focused on open-source operating systems, specifically OpenBSD and Arch Linux. In addition to performing administration tasks in such environments, their design and implementation is of great interest to me academically. It is on these Unix systems that I conduct the majority of my software development both at work and for my own personal education.

## Portfolio & Programming Philosophy

Some of my previous projects can be found on my website at <http://metasyntax.net/>. You can also read more about my professional approach to computer science and writing code on my [resume page](#) (listed at the beginning of this document).

## Organizations

- Organizations / Leadership Roles

- **OpenID Extension Proposal Working Group**

- Specification planning and standards document writing, summer 2008 – fall 2008.

- Worked with other members of the single sign-on community (including representatives from Verisign) to draft a proposed OpenID extension to provide specific information about the assurance level of an authentication between client and OpenID provider. I was the primary author of the extension specification text. After developing a complete draft, the proposal (called “PAPE-AM”) was ultimately not accepted. A copy of the specification is available upon request, or by searching the OpenID specs-pape mailing list during September 2008 [[link](#)].

- **Association For Computing Machinery, IPFW Chapter: Fort Wayne, IN**

- Vice President, 2006 – 2007.

- President, 2007 – 2008.

- Professional Membership

- Association for Computing Machinery (ACM), since 2006.

- IEEE (Computer Society), since 2009.

- TUG (T<sub>E</sub>X User Group), since 2009.

Additionally, I passed the CISSP examination in December 2009, but I will not receive my full certification until I spend a few more years in a security-related field.

## Personal Interests

If you’ve read this far then you may be interested in hearing a little bit more about my personal fascinations. I’m completely dedicated to my profession in a variety of fields; I read programming books for fun and spend the majority of my free time working on personal projects. Some of the areas that I am interested in include:

- **Programming Languages**

- All manner of programming languages and their implementations are intriguing to me. I’m quite familiar with many different languages, and I have drawn on this knowledge to come up with ideas for two new languages (both of which are still in the planning phase): Segno, a Smalltalk-inspired object-oriented language; and Coda, a Lispy language which similarities to Scheme.

- **Digital Typography**

- Topics in digital typography, based technically in the world of Donald Knuth’s T<sub>E</sub>X system, are also of great interest to me. Typesetting is an area in which science and math intersect with art and the historical elegance of the written word. This resume is typeset using X<sub>Y</sub>T<sub>E</sub>X and L<sup>A</sup>T<sub>E</sub>X.

- **Lower-Level Engineering Practice**

- I have occupied a lot of time thinking about how to improve the practice of engineering from the ground up. Investigations into different styles of writing code caused me to implement Tensile, a tool for literate programming. At work I have applied new techniques in estimation, planning, coding, building, and documenting to improve the quality of our software from the source level up.