

## Michael J. Pedersen

42 Henry St  
Oxford, NJ 07863  
[m.pedersen@icelus.org](mailto:m.pedersen@icelus.org)  
(908) 718-1337

### Executive Summary

A Developer with over 15 years of experience writing tools for Windows, Linux, UNIX, and Macintosh systems. A strong focus on writing programs to make processes easier and more efficient for the entire work force. Comfortable in a wide range of working conditions. Work environments have been heterogeneous (Windows, OSX, and several flavors of Linux), small to medium sized (from 10 to 120 servers, 20 to 300 workstations), and mixed locations (all local to all remote teams).

### Relevant Work History

#### Open Source Software Contributions

2002-Current

- Starting in 2009, I began participating in the [TurboGears](#) project, working primarily on the documentation. In 2011, I took over as project maintainer, and we put out three releases in that year alone.
- Created [Java](#) plugin for [Openfire XMPP server](#), allowing [vBulletin](#) forums to have a working XMPP server for their communities.
- Contributed patch to [Mercurial](#) to assist with repository conversions. Specifically, it allows branches to be renamed (useful for repositories that used named branches in [Subversion](#) to change their main trunk location).

#### Choopa.com, Sayreville, NJ - Developer

2012

- Developed interface library to allow internal systems to manage [OpenStack](#) nodes, and gather billing information from them.
- Refactored in-house [Nagios](#) web interface. This reduced the workload from six files down to one when adding new checks.
- Built [Nagios](#) configuration file generator for in-house web interface for [Nagios](#).

#### 6th Avenue Electronics, Springfield, NJ - Systems Administrator, IT Generalist

2005-2008, 2011

- Developed numerous data validation scripts to validate and scrub data coming from [SAP](#) for import into [Tyler](#) system.
- Developed program to copy all sales data from [Tyler](#) POS system (which uses only ISAM files) to [PostgreSQL](#) database.
- Frequently wrote scripts to satisfy various company needs using a variety of scripting languages ([AutoIt3](#) and [Python](#) being the preferred choices, depending on platform).

#### Datapipe, Inc., Jersey City, NJ - UNIX Developer

2008-2011

- Created new backup monitoring and reporting system called [StorageWeb](#), enabling a new revenue stream for Datapipe.
- Developed a system called unixops to allow Datapipe technicians to use one time ssh keys for accessing client machines as needed.
- Developed multi-threaded back end daemon which connected to the various storage systems and gathered the data about the stored data for reporting before pushing aggregate data to the billing system.
- Developed web interface that would allow users to drill down and see how storage was being used (by client, by server, by data center, and/or by storage type).
- Debugged issues with [Python](#), [FreeBSD](#), [Apache](#), and modwsgi. Turned out to require specific compilation options to get these all working correctly.

## Specific Skills

### *Software Design and Configuration Management Tools*

	<b>Time Used</b>	<b>Last Used</b>	<b>Proficiency</b>
<a href="#">Git</a>	2 years	2012	Fair
<a href="#">Mercurial</a>	2 years	2011	Good
<a href="#">Subversion</a>	2 years	2010	Good

### *Markup Languages*

	<b>Time Used</b>	<b>Last Used</b>	<b>Proficiency</b>
CSS	2 years	2012	Fair
HTML	12 years	2012	Very Good
XML	2 years	2011	Fair

### *Programming Skills*

	<b>Time Used</b>	<b>Last Used</b>	<b>Proficiency</b>
Object-Oriented Design	8 years	2012	Good
Object-Oriented Programming	8 years	2012	Very Good
Refactoring	4 years	2012	Very Good

### *Programming and Scripting Languages*

	<b>Time Used</b>	<b>Last Used</b>	<b>Proficiency</b>
<a href="#">Bash</a>	6 years	2011	Good
C/C++	12 years	2009	Good
<a href="#">Java</a>	1 year	2011	Fair
Javascript	2 years	2012	Fair
<a href="#">Perl</a>	6 years	2012	Good
<a href="#">PHP</a>	2 years	2012	Good
<a href="#">Python</a>	4 years	2012	Very Good

### *Database Skills*

	<b>Time Used</b>	<b>Last Used</b>	<b>Proficiency</b>
Relational Schema Design	3 years	2011	Good
Structured Query Language (SQL)	10 years	2012	Very Good

## Education

East Stroudsburg University, East Stroudsburg, Pennsylvania  
Bachelor of Science in Computer Science

Graduated 2000

## Project History

### *StorageWeb*

<b>Period</b>	2010
<b>Company</b>	Datapipe
<b>Tools</b>	<a href="#">FreeBSD</a> , <a href="#">Python</a> , <a href="#">Apache</a> , <a href="#">PostgreSQL</a> , <a href="#">TurboGears</a>
<b>Platform</b>	<a href="#">FreeBSD</a> , Web Browser

Datapipe manages thousands of servers. Many of these servers are connected to various shared storage systems, including [3Par](#), [Isilon](#), and backup servers. Datapipe required an ability to do reporting on what data was being stored on these systems for each client, and then report that data back to billing. StorageWeb was written to fill that need.

- Debugged issues with [Python](#), [FreeBSD](#), [Apache](#), and modwsgi. Turned out to require specific compilation options to get these all working correctly.
- Developed web interface that would allow users to drill down and see how the storage was being used (by client, by server, by data center, by storage type).
- Developed multi-threaded backend daemon which connected to the various storage systems and gathered the data about the stored data for reporting.
- Developed backend daemon that pushed aggregate data to the billing system, allowing billing to finally happen for all clients.

### *PyTyler - Tyler POS to PostgreSQL Migration Tool*

<b>Period</b>	2007, 2011
<b>Company</b>	6th Avenue Electronics
<b>Tools</b>	<a href="#">Python</a> , <a href="#">PostgreSQL</a> , <a href="#">Tyler</a> POS System
<b>Platform</b>	<a href="#">HP-UX</a> , <a href="#">Debian</a> GNU/Linux

[Tyler](#) is a point of sale system used by many smaller retail establishments. [Tyler](#) stores data in a set of proprietary ISAM files. These files do not have a modern access tool available (such as [Crystal Reports](#)) to perform reporting.

The users needed an easy way to report on the data, and this meant a tool was needed to copy the data from the on-disk files into a formal SQL server of some variety. In less than a month, I wrote a tool in [Python](#) to read the [Tyler](#) data files and load the information into a [PostgreSQL](#) database on a nightly basis.

This tool copied the entire database, comprising approximately 36,000,000 records, 140 tables, and 22 gigabytes of disk space. The program worked by reading the structure definition from the configuration files and recreating the structure in [PostgreSQL](#). PyTyler would then read each table, row by row, parse the data in the row, and load it into [PostgreSQL](#) server.

This allowed the users to use standard ODBC drivers to access and report on the data.

- Developed a tool to read configuration of ISAM files, and generate SQL "create table" statements mirroring the structure of the file.
- Created a specialized reader class which could read the data stored in the ISAM table.
- Developed small web server application to provide status page for administrators while migration tool runs
- Reduced total run time from 13 hours to 5 hours by converting the entire application into a multi-threaded application.
- Verified that data is being copied into the system correctly.