

**Michael J. Pedersen** : [\(908\) 283-0318](#) : [datacyclist@gmail.com](mailto:datacyclist@gmail.com) : [My Site](#) : [LinkedIn](#)

## Executive Summary

As a Software Engineer, I have spent 6 years of my career focused on delivering high quality software to my company's customers, with their focus and needs being on sorting through large numbers of documents in a timely fashion. This has meant understanding ingestion, storage, and display of arbitrary data. It has included custom data visualizations. This was primarily done with [Python](#) and [Ubuntu Linux](#), but has also included work with [Perl](#) and [PHP](#).

## Relevant Technical Skills

- **Big Data:** [Google Big Query](#), [HDFS](#), [Hive](#), [YARN](#), [Alluxio](#), [Impala](#), [Trino](#), [Kafka](#), [Kubernetes](#), [Dagster](#), [Helm](#)
- **Database Servers:** [MySQL](#), [PostgreSQL](#), [Microsoft SQL Server](#)
- **Database Skills:** [PostgreSQL](#) Database Administration, Relational Schema Design, Structured Query Language (SQL)
- **Programming and Scripting Languages:** [Bash](#), C/C++, [Java](#), Javascript, [Perl](#), [PHP](#), [Python](#), [Terraform](#)
- **Programming Skills:** [Docker](#), [Jenkins](#), [Jira](#), [IntelliJ IDEA](#), Object-Oriented Design, Object-Oriented Programming, Refactoring
- **Software Configuration Management Tools:** [Git](#), [GitHub](#), [GitHub Actions](#), [Mercurial](#), [Subversion](#)

## Relevant Job History

### EvolutionIQ - Senior Software Engineer

New York City, NY - Feb 2024 - Current

- Created infrastructure to provide ephemeral environments, allowing testing of code branches before sending those code changes to the company at large.
- Orchestrated [Google Cloud](#) infrastructure with [Terraform](#), managing [GKE](#), [BigQuery](#), and developer virtual machines for scalability and efficiency.
- Redesigned EvolutionIQ's CI/CD pipeline, enhancing efficiency in development workflows.
- Fixed critical bugs in locally developed [GitHub Actions](#), ensuring smooth and reliable environment promotion.
- Built a template repository to guide EvolutionIQ teams in using [GitHub Actions](#) for deployment, as well as setting up data pipelines with [Dagster](#).
- Developed a Python-based CI/CD library to manage complex actions beyond [Bash](#)'s capabilities.
- Implemented [nektos/act](#) to enable developers to test build and deploy actions locally before committing to [GitHub](#).
- Refined [data retention policies](#) to guarantee compliance and ensure critical data availability for legal requirements.
- Implemented SLA monitoring with [Grafana](#), [SendGrid](#), and [PagerDuty](#) to proactively detect and alert customers and engineers about overnight job failures, ensuring swift issue resolution.
- On-call support on a rotating basis.

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## Pulsepoint - Data Engineer and Director of Infrastructure for Data

New York City, NY & Newark, NJ (Telecommute) - Mar 2015 - Nov 2023

### Director of Infrastructure for Data, May 2018 - Nov 2023

- Architected data streaming that manages 40T of data/day.
- Lead maintainer for ETL pipelines, encompassing over 250 transformations.
- Established new data centers in Europe and in Virginia.
- Migrated data center, moving processing of data pipelines to new data center.
- Guided the team through splitting our ETL pipelines into multiple repositories.
- Organized the migration of ETL pipelines from Python 2 to Python 3.

### Data Engineer, Mar 2015 - May 2018

- Implemented data duplication between two [Hadoop](#) clusters.
- Created ELT jobs to ingest third party data to make it available internally.
- Installed and configured multiple [Hadoop](#) clusters.
- Developed new ETL jobs to aggregate data from Pulsepoint's RTB exchange.
- Converted [Sqoop](#) jobs to use [FreeBCP](#) instead.
- Collaborated with other teams to help them use the systems to find the data they need.
- Worked with other teams to define and then implement needed features for our internal ETL pipeline framework.
- Added over a hundred automated tests to our ETL pipeline.
- Managed data backfill issues whenever they arose.

## Weight Watchers - Systems Engineering Lead

New York City, NY - Nov 2014 - Feb 2015

- Developed lightweight monitoring tool for use within my group.
- Configured [Vormetric](#) products to ensure [HIPAA](#) compliance for customer data.
- Worked to transfer from [Rackspace Cloud](#) to [Openstack](#) based private cloud.

## OrcaTec, LLC - Developer

Atlanta, GA (Telecommute) - Jun 2012 - Oct 2014

- Developed advanced search tool using [Python](#), [TurboGears](#), and [jQuery](#).
- Created new document production framework from scratch.
- Added holds and matters framework, allowing customers to state that documents belong to specific cases and should not be deleted while the cases are ongoing.
- Wrote [Python](#) framework to manage long running background jobs.
- Reduced multi-hour [SQLAlchemy](#) bulk database jobs to minutes.
- Found major security hole (remote code execution) and closed it.
- Spearheaded conversion from [YUI 2](#) to [jQuery](#) and [jQueryUI](#).
- Documented internal server API, wrote a [Python](#) class to standardize its use.
- Added tag cloud (using [awesomecloud plugin for jQuery](#)).
- Added support for allowing customers to login using [OpenID](#).
- Mentored other developers in the use of [TurboGears](#), [SQLAlchemy](#), [Python](#), and [JavaScript](#).
- Organized weekly meetings for members of the frontend (OTGUI) team, providing a chance to discuss (in depth) the issues the team was facing.

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## **Choopa.com - Developer**

Sayreville, NJ - Jan 2012 - May 2012

- Developed library to manage [OpenStack](#) nodes, and gather billing information.
- Built [Nagios](#) configuration file generator for in-house web interface for [Nagios](#).
- Configured [Bacula](#) backup system as replacement for custom backup scripts.
- Reconfigured [Nagios](#) monitoring, reducing full check from 8 hours to 2 minutes.
- Refactored in-house [Nagios](#) web interface. This reduced the workload from six files down to one when adding new checks.
- Several smaller bug fixes and features throughout the internal code base.

## **Education**

Bachelor of Science in Computer Science, 2000  
East Stroudsburg University, East Stroudsburg, Pennsylvania

## **Professional Certificates**

[Google Cloud Certified Professional Data Engineer](#) (Jan 2024)  
Online Course - Google