

**David Link**  
Senior Software Engineer



Programmer / Systems Architect / Data Modeler /  
Systems Integration / Project Manager / Web Apps /  
Data Warehousing / Unix / Open Source / Cloud  
Computing / Python Data Problem Solver.

205 Bell Hollow Rd \* Putnam Valley \* NY  
914-629-5723 \* dmlink@gmail.com

<https://github.com/dlink>

I am a builder. I am a software developer. I build stable reliable automated systems which run businesses, analyze data, integrate systems, and control process workflows. The systems I build are robust and stand on their own, allowing business users to control and maintain them.

I have an elegant approach to problem solving which helps enrich the companies I work for. An ounce of good design can be worth a million dollars a few years down the road. I pay attention to details, and study complex problems so they can be express as a set of simpler ones.

My understanding of Technology, the use of Analysis, Design, Planning, Agile Development, and Team building, together with strong Communication Skills make me a great asset to any development team.

#### **TECHNICAL SKILLS:**

Object-Oriented Programming, Test Driven Development, Data Warehousing, Business Intelligence, Data Modeling, Data Forensics, Unix, Python, SQL, Ruby, PHP, Perl, HTML/CSS/Javascript/JQuery, C++, Java, XML, XSLT, EDI, Shell Scripting, Systems Administration, Cloud Computing, Amazon EC2, RDS, Rackspace, Excellent Schematic Documentation, Artist, Agile Software Development, MySQL, Postgresql, Oracle, MongoDB, Redis, Memcache, ISAM

#### **LEADERSHIP SKILLS:**

I manage complex projects, I meet deadlines, and get things done. This benefits the employees using those systems and helps the company's bottom line. My success as a project manager comes from my organizational skills, my documentation skills, and the ability to communicate information both ways between business leaders and the development team. I lead by example by being hands one, creating quality, and demonstrating a good work ethic. My philosophy is "Let the best idea win", which means being open to hearing all ideas.

#### **EXPERIENCE:**

##### **Tommie Copper**

09/2015 - Present

Mt. Kisco, NY

##### **Senior Developer**

- **Technical Lead** for Tommie Copper –Software and technology decision maker, Visionary
- **Data Warehouse**, Analytics, and Reporting System – Built from the ground up, continual enhancements, used by everyone, answers our important business questions with data. Python, MySQL, Unix, Rackspace Cloud Servers, Rackspace CloudDB
- **Central Integrations:** Built from ground up, connects all internal and 3<sup>rd</sup> Party Software. Integrations with Magento, BlueCherry ERP, Call Center, Vantiv Payment Gateway, Google Analytics, Eicoff Media, Bronto Marking, QuickPivot Marketing, Commission Junction, BazaarVoice Ratings, Feedonomics. Python, MySQL, Unix, ETLs, XML, EDI, API, sFTP.

- **Ecommerce Website** – Leading ecommerce development team, ongoing maintenance and enhancements on two Magento Websites, housed in the cloud. PHP, MySQL, Unix
- **DevOps** – Ongoing Automation and streamlining of our Cloud Footprint, system workflows and people's daily workflows.

## North American Power

10/2014 – 09/2015

Norwalk, CT

### Senior Developer

- Tracking Energy Providers, Rates, Customers, and Energy usage
- Maintaining legacy system written in PHP Zend, MySQL, and Linux.
- Designing and building replacement system to handle growth. Writing in Python, MySQL, and Linux
- Heavy Data Modeling, Analytics, and Forensics

## Flat World Knowledge

2010 - 10/2014

Irvington, NY; New York, NY; Washington, DC.

### Senior Programmer / Systems Integration.

The team and myself designed, implemented and deployed the company's back-end content server (Bookserver), which became the backbone of the companies content. This system allowed editors to publish books, and Professors to customize them. It generates HTML, PDFs and eBooks. It also integrates with off-site printers to produce physical books. The system allows company stakeholders to monitor the workflow of the system, and provides RESTful APIs for further integration by other systems. We built the full stack system using Python, MySQL, Docbook, XML, XSLT, HTML/CSS, JavaScript/jQuery, CherryPy and Memcache.

Designed and Built Data Warehouse / Central Reporting System:

- Integrates Data from Ruby on Rails, Drupal, Salesforce.com, Silverpop Marketing System, Paypal, and Quickbooks
- Used for all Company Reporting: Institutions, Professors, Courses, Students, Orders, Payment, Revenue, and Student Access and Usage
- Answers critical questions about the Business that could not previously be answered, due to bad data.
- Provides on-the-fly Analysis with custom report builder controls.
- Draws Geo Map of Institutions that use our Textbooks.
- Analysis: Data Mining, Data Forensics, Data Cleaning, Data Modeling, and ETLs.
- Developed Open Source Simple Python Framework modules: vweb, and vlib available on github.
- Written in Python, MySQL, HTML/CSS/Javascript/JQuery/d3, and Pentaho Data Loader

Salesforce Integration:

- Allow changes made in Salesforce.com by Sales Team be reflected in our Front End application
- Allow changes in the Front End – Professor Registrations, Course Adoptions, etc. – Be reflected in Salesforce.com.
- Developed Open Source SalesforceApi wrapper available on github.
- Python, MySQL

Commerce Server Rewrite:

- Worked with front-end team to migrate Commerce Server off of Drupal and into Ruby on Rails.
- Wrote Paypal processing, Printer Order processing, Taxcloud integration, and

Designed and Migrated Production Systems to Cloud Servers:

- Set up Rackspace Dedicated and Cloud Servers
- Set up Amazon EC2 Instances with RDS databases.
- Created reusable Server Images loaded with full Production tool stacks (uberservers)

Automated Royalty Reporting

- Allow Accounting to accurately report Author Royalty Reporting
- A complex problem due to many factors
- Multiple Authors with different pay splits
- Professors can customize Author books
- Separate Revenue Channels -- Direct to Students, Bookstore Sales, and Special Institutional Deals.
- Separate Data Sources -- Drupal, Ruby on Rails, Individual Institutional data, Paypal and Quickbooks
- Multiple Product Types
- Generic Access Codes vs Access Code Redemption Related Data
- Bookstore Returns, and
- 2 Rewrites of Company Commerce Server.
- Achieved by creating a Standardized Data Model and multiple ETLs.
- Written using Python, MySQL

## MyPublisher.com

2006 - 2010

Valhalla, NY

**Data Architect / Senior Programmer** of MyPublisher.com, Custom Photo Book publishing company. My team designed, developed and maintained all aspects of book manufacturing, reporting and accounting. The Plant System includes an automated manufacturing workflow engine, resource management, and batch job processing. It has a very well designed **Data Model** and **Object Model**. Our **Intranet** reporting system integrates all of manufacturing. We also designed and built our **Online Bookshelf** Web Application which includes a **Web 2.0** Bookviewer Application.

The Plant System is built in **Python**, **MySQL**, and **HTML**, running on **Linux**. It manages over 30 Terabytes of customer and manufacturing data. The Bookshelf System is built in **PHP**, **Flash** and **HTML**.

The Plant System is designed and written in a clear cohesive manner that has been invaluable to the company. First it allows us to be agile and change to business and marketing needs quickly. Second it allows new engineers to come in and hit the ground running with little to no ramping up required. And lastly, it provides stable functionality that MyPublisher.com relies on to compete in the market place.

## Nielsen Entertainment at VNU, Inc.

2001 - 2006

White Plains, NY

**Software Architect / DBA** of Nielsen Videoscan, a subscription based **Web Application** for reporting and analysis of Movie Video retail data with multi million dollar client base in Hollywood. There are two US systems and one for Canada, each running on the same **Code Set** and **Database Schema** but with different Database Data.

My responsibilities included the full development life cycle of these products from conception to market. I developed the systems on an **Open Source Tool Stack** consisting of **Perl CGI** on **Apache**, using the **PostgreSQL Database** on **Linux**. I then migrated the product to **Mod Perl**. The **Data Model** is in **Third Normal Form** but is also **Denormalized** where necessary for performance. The largest of the three systems is 125 Gigabytes on disk. **SQL** Access is contained within an **Object Data Layer**. The most sophisticated component of the system is a **Web Based Data Warehouse Query** facility that does not require a browser plug-in on the client side.

I used of **CPAN modules**: *CGI, DBI, HTML::Table, Relations::Query, POSIX, Spreadsheet::WriteExcel, and Apache::Htpasswd*. We also use **DHTML** via **Javascript**. Very important to us was the **CVS source code repository** which allows control of **release cycles** as well as allowing many developers to work independently on the system at the same time. I used **UML diagrams** to communicate new design specifications to developers. For **Linux** distribution, we have used **Mandrake, Redhat** and **SUSE**.

In Addition I built an in house application used to help our analysts support the main systems from a central database of common attributes. This is written using **PHP** with **Apache** and the **MySQL Database** on **Linux**.

I was hired to help transition the existing development staff from **ISAM based technology** to **Database technology**. I am proud to say this was fully accomplished, and new development at Nielsen Entertainment is now done in **Perl** and **PHP** on **Apache 2.0** with either **PostgreSQL** or **MySQL Databases** on **Linux**.

## Oracle Corporation

1995 - 2001

Valhalla, NY

Dec. 1999 - Jun 2001:

**Software Development Manager** of the Oracle Internet Procurement Enterprise Connector (OIPC), an application that integrates or loosely-couples **Oracle Applications** with **SAP** and other **ERP systems**. My team consisted of four senior engineers. The software relies on middleware for **B2B** or **A2A** at large client sites internationally. Implementation was mostly in **PL/SQL** in **Oracle RDBMS 8i** using **OAG compliant XML** for transactions, as well as **Java** and **perl**, running on **Solaris** and **Linux**.

Feb 1998 - Nov 1999:

**Senior Principal Engineer** developing pilot project for Oracle Process Manufacturing application (OPM) using **Oracle Business Components for Java (BC4J)** using **JDeveloper** and **Oracle RDBMS 8i** on **Solaris**.

In charge of Global **C Coding Standard** Compliance project (OCCS) for all of OPM. I Converted 1,000,000 lines of **C code** with minimal averse impact. The project included **research**, **programming**, **automation** and **cross functional team** coordination with the help of 10 engineers. The technology involved included **ANSI C**, **Oracle RDBMS**, **PL/SQL**, **OCI**, **Oracle Pro\*C**, **Oracle Forms**, and **Perl** on **Solaris** and **Linux**.

Jan 1997 - Jan 1998:

**Senior Applications Engineer** whose responsibilities included development of **Capacity Requirement Planning (CRP)** and **Material Requirement Planning (MRP)** modules of the Oracle Process Manufacturing Application (OPM). I worked on a team with two other programmers. The two products were mostly implemented in **C**, **Oracle Pro\*C** for the **SQL**, **JACC JAM**, and **Oracle RDBMS**. We started to port much of the functionality into **PL/SQL** and pure **SQL**. I was also responsible for all of the **Unix Shell Scripting (ksh)** on **Solaris**.

Oct 1995 - Jan 1997:

**Unix System Administrator** whose responsibilities included administration of 32 midrange **Unix** and **VMS** computers. This included managing users, disks, applications, networks and system configurations. Automation was paramount. I used **C**, **Unix Shell scripting (ksh)**, **sed**, **awk** and **rsh** to automate host and user maintenance across all flavors of **Unix** that we supported at that time. Those included: **HP-UX**, **AIX**, **SunOS**, **Solaris**, **Digital (OSF1)(TRU64)**, **Data General**, **Sequent**, and **SCO XENIX**.

## Nitrogen Fixation Research Center

1990 - 1995

University of Mexico, Cuernavaca, Mexico

**Systems Administrator** in charge of all Information Systems. My responsibilities included **purchasing**, **configuration**, **maintenance** and user support of all computer equipment at the Center. I was the **VAX VMS** and **Sun Solaris Unix System Administrator**. I set up the first **networks** and introduced the Center to the **Internet**.

**Molecular Biology Programmer**. I supported programs for **Research** with **GENBank** and **EMBL** using **C**, **Perl** and **Prolog** on **Solaris**, and **Shell Scripting in VMS**. I developed a Research Grant Accounting system written in **MS Professional Basic**, and **C** using **MS PROISAM** on **DOS**. I set up **Bioinformatic databases** using **4th Dimension**, **Filemaker Pro** and **Hypercard** on **Macintosh**. I set up a **webserver** using **NCSA httpd** and I developed the Center's first **website** using standard **HTML**.

## Fish Software

1992 - 1994

Cuernavaca, Mexico

Designed and developed six small business accounting applications -- Menu driven systems with pop-up windows written for **MS-DOS** in **MS Professional Basic**, **PROISAM** and **MS Quick C**.

**G & Z Systems, Inc.**

1981 - 1989

Hawthorne, NY

Responsibilities included design and development of business applications on microcomputers for large and small companies. The company specializes in turn-key solutions. I worked on accounting applications, including: **A/R**, **A/P**, **G/L** and **P/R**, using **THEOS O/S**, **UX Basic** and **C**.

**EDUCATION**

|                                 |             |             |
|---------------------------------|-------------|-------------|
| SUNY Empire State Hartsdale, NY | Mathematics | 1998 - 1999 |
| SUNY Purchase, NY               | Fine Art    | 1981 - 1982 |
| SUNY Oneonta, NY                | Mathematics | 1979 - 1981 |

**SPECIAL INTERESTS**

Art, Philosophy, Mathematics, History, Go, Fluent in Spanish.