

# DAVID THOLE

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## Technical and Competencies

### Concepts

- Azure (Many data offerings)
- Data Mining/Machine Learning
- Design Patterns - MVC, DA, etc
- Docker
- Git/SVN
- GNU Tools (sed/awk/etc, Bash scripting)
- Graphic Design/Video - Photoshop, Final Cut Pro
- Linux (Administration/Use - Arch, CentOS, Gentoo)
- Project Management - Agile/Waterfall, requirement gathering, etc
- Windows (Win 2000+, incl. client/server)

### Database Technologies

#### Microsoft SQL Server

- SQL Server 2012-2019
- SSRS (SQL Server Reporting Services)
- SSIS (SQL Server Integration Services)
- PowerBI (On-Premise, Cloud Hosted)

#### Other

- MySQL (Some administration, mostly basic use)
- PostgreSQL (Intermediate use)

### Programming

- AppleScript
- Bash
- Common Lisp
- C++/Visual C++
- C# (4.X and .NET Core)
- Delphi/Object Pascal
- ELisp (Emacs Lisp)
- F#
- HTML/CSS/Bootstrap/etc
- Java
- Javascript/TypeScript
- Perl
- PHP
- PowerShell
- Python
- R
- Ruby
- Visual Basic (incl. VBA)

**PROFESSIONAL EXPERIENCE**

*Senior Software Architect - University of Miami, Miller School of Medicine* 11/22 - CUR  
Remote

- Leads a team of developers implementing technological solutions for the college.
- Meets with senior leadership and looks at architectural roadmaps and current to future state.

*Software Architect, Data Architecture - Duck Creek Technologies* 08/22 - 11/22  
Remote

- Works in the Architecture Core group to weigh in on architecture decisions for the company.
- Primary focus is working on architecture related to Duck Creek OnDemand, in Azure.
- Experience with Azure SQL, Cosmos DB, and other data offerings from Azure.

*Enterprise Data Architect - United Fire Group Insurance* 11/20 - 08/22  
Cedar Rapids, IA

- Main contact for the GuideWire set of products (primarily DataHub)
- Help to define data requirements (feeds, incoming, outgoing) from a number of systems including Mainframe, SQL, etc
- Help to increase collaboration between different units and to increase efficiency by ensuring the "right place" is used for data, and duplicate work not done.
- Working closely with the Enterprise Architects, Data Engineers, DBAs, and so on to define solutions that scale.
- Helps organize and lead the Data Governance initiative at UFG, including creation of Data Dictionaries, Data Lineage, and processes to keep this up to date and available to the right people.
- Helps with maintaining Data Security by mapping out who is using what data, what systems consume it, and mitigation strategies to prevent data leaks from occurring.

*Adjunct Lecturer - University of Iowa* 01/21 - 03/23  
The University of Iowa, Iowa City, IA

- Instructor for their Data Analytics department, focusing on languages such as R and Python.

*Solution Architect - Kingfisher Technologies* 05/19 - 11/20  
Cedar Rapids, IA

- Worked both individually, and in small teams for various clients in a remote capacity
- Developed in-house software (MVC/C#), and scripts (TSQL, PowerShell) to support the business environment
- Managed large-scale SQL Server systems in a number of ways:
  - Performance Tuning - using Query Store and Sentry one to identify highly deviational queries and optimize it.
  - Index Optimization - Reducing redundant indexes, creating better covering queries at a reduced size.
  - Data Modification - Utilizing different file groups and/or tables, moving data between an active and an inactive table using TSQL
  - TSQL Maintenance Scripts - Developed my own, on top of off the shelf solutions (e.g. OLA scripts) to meet needs such as determining table growth, and so on.

*Senior Application Developer - College of Pharmacy* 06/13 - 01/21  
The University of Iowa, Iowa City, IA

- Worked both individually, and in small teams as the technical lead, to develop software solutions for use by the COP and others.

- Created a new Electronic Syllabus system (NewView), which is used to help with accreditation and mapping.
- Created an Asset Management system, used to track non-capital assets.
- Supported multiple departments with their 3rd party apps (mostly in Microsoft Access).
- Managed, or helped to manage 4 different SQL Servers. Some of them in an isolated UIP environment.
- Helped to support research done through using Helium/Neon and their own systems.
- Some miscellaneous help desk support when needed.
- Managed the IIS servers for both test and production environments. Migrated on-premise systems to Microsoft Azure
- Developed PharPeople, a population listing of who all should be part of pharmacy. This takes in data from IDW, HR, AD, and APR, applies business rules and gives a single population of people. This is primarily used on the website, but there are plans to make this the definitive list for all pharmacy applications.

*Senior Application Developer - College of BioChemistry*

05/19 - 01/20

The University of Iowa, Iowa City, IA

- Worked with three labs on their computational needs.
- Acted as project manager in determining requirements for software and interfacing with central IT.
- Centralized and organized scripts/processes to prevent duplication and confusion for what script went where.
- Acted as mentor to many lab members teaching skills such as Python, Bash (use and programming), Excel, among other skills.
- Focused on making the labs more efficient and self sustained
- Developed code in Python to do image analysis, cluster (SNP/mutations) analysis, and reporting.
- Developed videos and training documents to aid in learning.

*Application Developer - Center for Bioinformatics and Computational Biology*

08/10 - 06/13

The University of Iowa, Iowa City, IA

- Worked with both individually, and in small teams, to develop tools which would facilitate the analysis of genomic data. Some tools include pipeline processes, scripts, and web tools.
- Worked specifically with the newest areas of genomics, including analysis of data through tools such as BWA, Bowtie, bfast, gatk, and genome toolkit.
- Learned and worked with optimization problems, including the use of of the incredibly optimized UNIX/Linux tools for doing as much data manipulation as possible.

*Application Developer - Research Information Systems*

11/06 - 12/10

The University of Iowa, Iowa City, IA

- Maintainer of the largest in-house application, UIRIS, which is a research administration application written in PHP.
- Developed over four large feature-set upgrades to individual sections of both UIRIS as well as stand-alone applications that took between 2-8 months each.
- Acted as project manager, leader, developer, and DBA in many situations as they were needed. Experience in using PHP, Ruby, Microsoft SQL Server 2008.
- Met with stake holders to gather requirements, develop time lines, plan releases, and coordinate testing.
- Lead 3 individuals over time; including one undergraduate, one graduate, and one full-time individual. Leadership included managing workload, coaching and determining performance.
- Was active on multiple hiring committees for both students and staff members.

*Application Developer - Townnews.com*

10/05-11/06

Moline, IL

- One of two developers on the largest in-house application, Newsys, which is a news-site CMS which is written in PHP.

- Also acted as the sole maintainer of a fairly large application called Autosys.

## EDUCATION

*Master of Computer Science*, focus: Data Mining and Knowledge Discovery  
The University of Iowa

Spring 2012

*Bachelor of Science*, Computer Science  
The University of Iowa

Spring 2005

## MEMBERSHIPS and TALKS

Presented at Iowa Code Camp five times (two over R, one over Python/Django, one over Common Lisp,  
one over Azure)

Active member in i380 (SQL Server), spoke one time over C#/MVC

Spoke at the UI Developer Community over Python/Django, and C#/MVC

Active leader of the R Users Group at the University of Iowa

Active member of TechCorridor.io

## HONORS

Dean's List (multiple years)

John Phillips Sousa Award

## INTERESTS

Project Euler

Open Source Development

Reading and Music

Studying/Learning Japanese (written primarily, oral some)

Calligraphy