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# Michael Davis

## Senior Software Engineer

### About Me

As a software consultant for a local firm, I have had the opportunity to work with a variety of different technologies and to solve problems across many different industries. Working directly with clients has allowed me to take on multiple roles within the project life cycle including, but not limited to, business problem analysis, system design, project management, and full-stack software implementation.

### Education

#### North Carolina State University

August 2006 – May 2009  
B.S. Computer Science

### Skills

**Languages:** Java, C#, HTML, CSS, JavaScript  
**Databases:** MS-SQL (SSMS, SSIS, SSRS), MySql, DB2  
**Frameworks:** .NET Core, Spring Boot, ORMs (Dapper, Entity Framework, Hibernate)  
**Mobile:** Native IOS and Android development, cross-platform Xamarin  
**Cloud:** Azure (App Service, SQL, Storage), AWS (EC2, RDS, S3, SES)  
**Other:** TDD, CI/CD, Git

### Work Experience

#### Senior Software Engineer

Piedmont Triad Computer Consulting | October 2009 – Present

Responsibilities:

- Full-stack software implementation, testing, deployment, and maintenance for clients
- Business problem analysis (e.g., requirements gathering; communicating with stakeholders; system design)
- Project management (e.g., providing timelines/estimates; feature design; scoping)
- Team Lead (e.g., sprint planning; leading standups; code reviews; mentorship)

Pivotal professional transitions:

#### 2019 – Present

- Personally hired several employees to expand PTCC’s software team
- Revamped internal processes and worked with the PTCC team to deliver several large-scope projects
- Developed internal git branching strategy, implemented CI/CD pipelines, scheduled sprint planning meetings, and led daily standups
- Project examples:
  - An education platform with a student-facing portal, student/transcript management, course setup and scheduling, and a shopping cart component to allow for online course purchases.  
**Tech:** Azure, .NET Core MVC, MS-SQL
  - An internal portal for an agency that assists municipalities with local compliance of required licenses within city limits. This included complex configuration and management to handle varying laws, license types, and renewal schedules. Businesses already in compliance were provided by the municipalities in a variety of formats that were passed into Apache Tika for extraction and subsequently fed into a full-text index for cross-referencing.  
**Tech:** Azure, .NET Core MVC, MS-SQL, Apache Tika, Google Vision APIs

- Onboarded team members onto an existing project that grew in scope and oversaw the development of a large customer-facing application. We implemented business rules for validation before application submission to eliminate common errors. I worked in parallel with other team members during development to ensure submitted applications were rendered in PDF format, stored in iSeries OnDemand imaging, and entered a custom internal workflow system for review.  
**Tech:** AWS, Java, Spring Boot, MySql, DB2 (internal), IBM ODWEK

## 2016 – 2019

- Moved cities and transitioned a majority of my clients to remote work (with occasional travel) while also signing contracts with new local clients
- Project examples:
  - Implemented EMV payments for a NC water company. The existing CSR solution is web-based, so EMV requests are placed in a queue. An EMV orchestration program receives the request, communicates to the reader via TCP, and the transaction proceeds. The web-solution polls for status while work proceeds.  
**Tech:** TSYS Integration and Certification, .NET 4.8, HTML/JavaScript
  - Began a large modernization effort for a North Carolina licensing board  
**Tech:** AWS (EC2, S3, RDS), Spring Boot
    - Shipped a new online license search system with a modernized-design and better UX. Search uses a read-only replica of license information from DB2 to MySQL on RDS.
    - Migrated internal systems to new web-based dashboards with a new underlying database. Developed glue code behind the scenes keeping old schemas and new schemas in sync.
    - Implemented and shipped online license renewals and servicing platform, serving 30,000 NC licensees and handling 90% of all renewals in 2019.
  - Established effective techniques for remote collaboration (e.g., collaborative sprint planning; screen-share demos; in-depth written communication and documentation)

## 2009 – 2015

- Established myself with several core PTCC clients while working on increasingly larger projects. Carved out my own space and launched many new projects due to my role as the company's sole developer.
- Pursued best-practices for SDLC (e.g., TDD; version-control; estimation techniques; CI/CD)
- Worked independently on client projects (e.g., gathering requirements; writing quotes; software implementation)
- Project examples include:
  - Fuel-level tracking, monitoring, and estimating for Veeder-Root gas-pumps connected via TCP/IP
  - Workorder and CSR software for a municipal water system that interfaces with legacy iSeries DB2 tables and ArcGIS Server
  - Android based overhead crane inspection software with offline-first SQLite storage
  - Digital signage solution for a regional restaurant chain utilizing Raspberry Pis configured to launch Chrome in Kiosk Mode

## Software Engineering Internships

*IBM | Summer 2007, Summer 2008, Fall 2009*

- Worked with WebSphere team to assist with testing SIP servlet implementation for JSR 289
- Implemented a highly available SIP B2BUA (back to back user agent) application using WebSphere clustering and provided feedback to management to model a real-world implementation scenario

Additional Project descriptions available on <https://www.michaelwda.com/projects>