

## Contact

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[www.abitofhelp.com](http://www.abitofhelp.com) (Company)  
[github.com/abitofhelp](https://github.com/abitofhelp) (Portfolio)

## Top Skills

Electrical Engineering  
Full-Stack Development  
Senior Web Developer

## Languages

English (Native or Bilingual)  
French (Limited Working)

## Certifications

Amateur Radio Technician License  
Amateur Radio General License  
Amateur Radio Extra License  
Private Pilot with Instrument  
Rating, Floatplane and tailwheel  
endorsements.

# Michael Gardner

Principal Full-Stack Engineer/Chief Architect  
Scottsdale, Arizona, United States

## Summary

For more than 20 years, I have used my technical expertise, customer relationship skills, and business acumen to support the success of my clients' projects. I am a dedicated learner and seek opportunities to explore new techniques and technologies.

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## Experience

### A Bit of Help, Inc.

9 years 3 months

(Ingios Geotechnics) Principal Full-Stack Engineer/Chief Architect

January 2019 - December 2024 (6 years)

Scottsdale, Arizona, United States

\*\* A letter of recommendation is available upon request.

\*\* This was a full-time, freelance, contract, and remote position.

- Developed a highly available, scalable, multi-region infrastructure using Azure Cloud Services, Kubernetes, and Terraform.
- Migrated microservices to Go and used Bazel for building, which reduced release build and deployment time by 77% and minimized third-party vulnerabilities.
- Created an automated CI/CD release pipeline using GitHub Actions and Bazel.
- Implemented secure interservice communications using gRPC and Linkerd2 service mesh, demonstrating unwavering commitment to the security of clients' data.
- Deployed enhanced monitoring and alerting systems using Prometheus, Grafana, and SendGrid.
- Designed and implemented an OAuth2 Identity Access System (IAS) architecture utilizing Okta's services, which ensures privacy and integrity.
- Utilized photogrammetry and raster techniques for the creation of client-specific GIS images.
- Built a proof-of-concept in Rust for high-performance engineering calculations.

- Conducted a review of technology, security, and procedures with the client upon completing my contract.

### Senior Software Architect & Developer

October 2015 - January 2019 (3 years 4 months)

Scottsdale, Arizona, United States

\*\* The following list summarizes my full-time, contract, and remote work engagements through various staff augmentation services.

(TopDevz) Implemented a rewarding engine for a web application that consolidated health data from users as well as third-party services. Whenever new data was received, the engine analyzed the user's progress toward achieving personal goals and granted rewards based on rubrics.

(Surge) Led the backend development of a Microsoft Web API RESTful web service for a GeoJSON web application, which included map generation, drawing tracks on maps, data analysis, and persistence using Microsoft Azure's Cosmos/MongoDB data service.

(Surge) Implemented a Microsoft .NET console application to efficiently transform loans that the financial institution had purchased into the format required by their systems.

(Surge) Led the backend development of a Microsoft Web API RESTful web service for an educational and self-awareness web application, which implemented proprietary algorithms for data analysis and used Microsoft Azure SQL for persistence.

(Surge) Created a Microsoft .NET console application to download energy market information from various online sources, implemented a proprietary data analysis algorithm, and persisted the results for further analysis in a Microsoft SQL Server database.

(Surge) Implemented a Microsoft-based solution for collecting and integrating a massive number of pharmaceutical studies from other organizations into the client's systems. A unique feature I created for this solution was a file deduplication engine for loaded files.

### Dell - Business Application and Technology Services

Senior Solution Architect

January 2013 - October 2015 (2 years 10 months)

Scottsdale, Arizona, United States

Worked remotely to create advanced enterprise application business solutions, including application modernization and custom application development using Microsoft .NET & ASP.NET technologies and integrating solutions with third-party web services.

### A Bit of Help, Inc.

Senior Software Engineer

January 1999 - January 2013 (14 years 1 month)

Scottsdale, Arizona

Created custom and commercial software applications for iOS, Windows, and other platforms as an Independent Software Vendor ("ISV").

### University of Alaska Fairbanks

Software Engineering Manager: Enterprise Application Services

January 1999 - January 2004 (5 years 1 month)

Fairbanks, Alaska

- Directed and prioritized the work for three teams, consisting of twenty software engineers, in the delivery of software solutions that integrated into an ERP architecture ("SCT Banner") using an Oracle database, PL/SQL, ASP.NET, C#, and Pro\*C.
  - Ensured the consistency and maintainability of existing applications by creating, maintaining, and enforcing standards/procedures for implementing technical solutions.
  - Provided project management, expertise, and support during system upgrades, installations, integrations, conversions, and maintenance.
  - Enforced standard company policies and procedures.
  - Ensured the creation, maintenance, and adherence to system documentation, operating procedures, best practices, and adherence.
- Analyzed complex business needs, researched, and recommended technical solutions.

### Rockwell Automation

8 years 1 month

Provisional Manager of European Application Engineering

January 1997 - January 1998 (1 year 1 month)

Mayfield Heights, Ohio

- Defined, established, and provisionally managed a new, expert team of Application Engineers from the European Community in Brussels, Belgium, which reduced costs and response time and increased customer satisfaction.

### Senior International Applications Engineer

January 1993 - January 1997 (4 years 1 month)

Mayfield Heights, Ohio

- Quickly resolved critical customer software, hardware, and commercial issues in a cross-cultural, international environment by leveraging my detailed knowledge of Rockwell Automation's products, policies, and people.
- Proactively gathered customer's suggestions for product improvements and advocated for incorporating these ideas into products.
- Proposed and implemented an application programming interface ("API") library in C and C++ to make information from programmable logic controllers ("PLC") in a manufacturing environment available to the rest of the enterprise (ERP).
- Reengineered and localized demonstration software systems (C/C++) used worldwide.
- Traveled extensively in Europe, Asia, and Latin America to resolve technical issues and conduct training seminars;
- Participated in trade shows and presentations worldwide;

### Senior Applications Engineer

January 1992 - January 1993 (1 year 1 month)

Mayfield Heights, Ohio

- Quickly resolved critical customer software, hardware, and commercial issues by leveraging my detailed knowledge of Rockwell Automation's products, policies, and people.
- Proactively gathered customer's suggestions for product improvements and advocated for incorporating these ideas into products.
- Created and presented worldwide training seminars on networking, TCP/IP, and Ethernet technologies, which increased customer knowledge and product sales.
- Created applications using C and C++ to highlight the reliability, high-speed data capabilities, and ability to distribute real-time information throughout an enterprise
- Designed and implemented an application programming interface ("API") library in C and C++, which permitted customers to easily control a VME based programmable logic controller ("PLC") and to manipulate control data. The API was distributed worldwide and included in the product's user guide.

### Senior Software Engineer

January 1990 - January 1992 (2 years 1 month)

Mayfield Heights, Ohio

- I led a team of six software engineers to localize Rockwell Automation's programming software packages for MS-DOS, which did not provide tooling or technology for globalization.
- Improved development practices using object-oriented analysis & design methodologies.

## PRAB Command

### Software Engineering Manager

January 1989 - October 1989 (10 months)

Portage, Michigan

- Directed a small team of software engineers in developing a voice-controlled robotic arm so physically challenged people could manipulate their surroundings more effectively in an office environment.
- Participated in negotiating the licensing of leading-edge voice-control technology from Boeing, which was crucial for the success of this product.
- On September 27, 1989, the Michigan State Senate, by Resolution #172, declared this new technology as its "Product of the Year".

Unfortunately, a change in upper management resulted in closing this division, despite having orders for the new product.

## Computer Advisory Group

### IT Consultant & Software Engineer

January 1986 - January 1989 (3 years 1 month)

Portage, Michigan

- Provided system administration, support, and strategic planning for DEC MicroVAX systems.
- Analyzed complex business requirements, designed potential solutions, and presented the options to our clients.
- Directed supported clients during system upgrades, installations, integrations, conversions, and maintenance of their infrastructure.
- Created custom software solutions for manufacturing and healthcare.
- Created an MS-DOS device driver to collect real-time manufacturing data from a plastic injection molding manufacturing environment and saved the data in a DBASE III database for reporting.

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## Education

### Touro University Jacob D. Fuchsberg Law Center

Juris Doctor (incomplete), General law studies · (1999 - 2000)

Western Michigan University

Bachelor's of Science, Computer Science; Biomedical  
Science, Chemistry, Mathematics; Addn: Physics & Electrical  
Engineering · (August 1981 - June 1989)

Glen Oaks Community College

General Studies and Mathematics · (August 1980 - August 1981)