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Top Skills

Senior Web Developer
Senior Web Architect
Software as a Service (SaaS)

Languages

English (Native or Bilingual)
French (Limited Working)

Certifications

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

Michael Gardner

Senior Web Developer & Architect (FREELANCE, CONTRACT, REMOTE)

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 who actively seeks freelance, contracted, and remote opportunities to explore new techniques and technologies, ensuring I stay at the forefront of the industry.

My primary focus since 2019 has been the creation of a multitenant, SaaS, GIS Cloud application using cutting-edge technologies such as Go, Azure Cloud Services, Kubernetes, Linkerd2, MongoDB Atlas, Okta IAM, Rust, Terraform, and Bazel. Previous developers produced partial solutions that failed using C# and Kotlin. I migrated requirements from C#, Kotlin, and Subject Matter Experts into a new architecture that is stable, performant, and in production. Additional features include the following:

- * Implementing microservices using gRPC inter-service communications;
- * Validating OAuth2 access tokens using Okta's IAM platform;
- * Sending notifications to users through SendGrid's platform;
- * Enhancing GIS images using photogrammetry and raster techniques;
- * Generating client-specific PDF reports after data analysis;
- * Implementing CI/CD using Azure Actions;
- * Streamlining client onboarding through Terraform scripting;

Experience

A Bit of Help, Inc.

8 years 9 months

Senior Backend Architect & Developer (FREELANCE, CONTRACT, REMOTE)

January 2019 - Present (5 years 6 months)

Scottsdale, Arizona, United States

(A Bit of Help) This full-time backend project started poorly with another contractor using C# and Kotlin, and when the client terminated the work, there was no consistent architecture or usable system. After scanning the previous work and collecting requirements from the client, I designed and implemented a multitenant solution using Cloud data storage and Azure Kubernetes. This solution met the client's requirements and was very performant, frugal, secure, and stable. Over several years, the system has scaled well, and I have continuously implemented a range of enhancements and new features, such as a Linkerd2 service mesh, monitoring via Prometheus & Grafana, and alerting with SendGrid. At version 5.5.0, the client's critical systems existed, met their requirements, and worked correctly, so my work transitioned to maintenance mode. I am providing ongoing, part-time services on a retainer. The client has plans for system expansion in the future.

Senior Software Architect & Developer (FREELANCE, CONTRACT, REMOTE)

October 2015 - January 2019 (3 years 4 months)

Scottsdale, Arizona, United States

The following list summarizes my recent engagements on projects.

(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 towards achieving personal goals and granted rewards based on rubrics.

(Surge) Lead 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) Lead 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 a variety of 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 that I created for this solution was a file deduplication engine for the files being loaded.

Dell - Business Application and Technology Services

Senior Solution Architect

January 2013 - October 2015 (2 years 10 months)

Remote

Worked remotely for the creation of 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, Enterprise Application Services

Software Engineering Manager

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 and maintenance of system documentation, operating procedures, and best practices, and the adherence to them.
- Analyzed complex business needs, researched, and recommend 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 product skills & knowledge, and detailed knowledge of Rockwell Automation's products, policies, and people.
- Proactively gathered customer's suggestions for product improvements, and advocated for the incorporation of 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++), which were used throughout the world.
- 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 product skills & knowledge, and detailed knowledge of Rockwell Automation's products, policies, and people.
- Proactively gathered customer's suggestions for product improvements, and advocated for the incorporation of 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 easily distribute real-time information to the 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

- Microsoft DOS did not have the ability to run localized applications for international users, so I analyzed, researched, and designed a solution. I lead a team of six software engineers to complete the localization of Rockwell Automation’s programming software package.
- Improved the development process by introducing and using object oriented analysis and design technologies and techniques.

PRAB Command

Software Engineering Manager

January 1989 - January 1989 (1 month)

Portage, Michigan

- Directed a team of software engineers and external consultants in the development of a voice-controlled robotic arm, so physically challenged people could manipulate their surroundings more effectively in an office environment.
- Successfully negotiated 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 the closing of 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 needs, researched, and recommend technical solutions.
- Provided project management, expertise, and support during system upgrades, installations, integrations, conversions, and maintenance.
- Created custom software solutions for manufacturing and healthcare;
- Created a MSDOS device driver that collected real-time manufacturing data from a plastic injection molding manufacturing environment and saved the data in a DBASE III database;

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)