



Ahmed Amin

Sr. Software Engineer

Between Tech & Business | Software Engineer | PHP | Laravel | Golang | React | NextJS | VueJS | NuxtJS | NodeJS | NestJS

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tl;dr

Seasoned Backend Engineer with over 8 years of experience in developing scalable software systems supporting millions of daily active users. Expertise in Web Development and Data Engineering, specializing in Microservices-based applications and distributed systems for medium to large-scale projects since 2011. A dedicated open-source contributor, I excel in delivering high-quality software from initial concept through to deployment, Proficient in building interactive and responsive web applications using React.js and Vue.js, and mobile applications with React Native. My backend development skills include Go, Node.js, and PHP, with extensive experience in integrating third-party services like Firebase, AWS, and Digital Ocean. I am well-versed in cloud platforms, continuous integration, and managing production environments, with a deep understanding of architecture and design patterns, I adhere to best practices in coding, release management, and maintenance. My approach is data-driven, using analytics and experiments to optimize features in production. I consistently deliver robust solutions with clean API designs and maintainable source code, ensuring the successful completion of technical deliverables.

Work History

Senior Software Engineer (Remote)

APTIVE Environmental – US, Provo, Utah

December 2023 – Present

- **Developed and maintained high-scalable internal systems supporting comprehensive pest control operations management across 5 integrated products:** routing/mapping, CRM, sales, field service, and Payment systems.
- Architected **microservices-based** solutions using **PHP, Go**, and **JavaScript** with **PostgreSQL** databases, deployed and managed using **Kubernetes** for container orchestration, ensuring optimal performance and scalability for field operations management.
- Led development on key projects including **Aspyn** (integrated 5-product suite) and **ARO (Active Route Optimization)**, streamlining pest control service delivery and operational efficiency.
- Integrated critical third-party services including **Google Maps APIs** for routing optimization and **VROOM API** for advanced route planning, enhancing field service efficiency.
- Mentored new developers during **onboarding processes**, facilitating knowledge transfer and maintaining coding standards across the development team.
- Recognized as **Employee of the Month twice** for exceptional problem-solving abilities and rapid issue resolution, consistently ranking as one of the top **GitHub** issue resolvers on the team.
- Technologies: **PHP, Go, JavaScript, PostgreSQL, Kubernetes, Microservices Architecture, Google Maps API, VROOM API**

Senior Software Engineer (Remote)

Asharq News – Dubai, United Arab Emirates

October 2020 – December 2023

- **Refactored legacy systems** and developed a comprehensive content management system (CMS) for Asharq.com, integrating APIs for crypto, news, Bloomberg, and Nabu UAE, ensuring seamless content delivery.
- **Architected and designed** the news platform for scalability and reliability, employing microservices architecture and serverless computing to optimize performance and user experience.
- **Utilized PHP, Node.js, and React.js** for backend and frontend development, creating robust and responsive applications that met business needs.
- **Conducted rigorous API testing** using Test-Driven Development (TDD) methodologies to ensure software quality and functionality, minimizing post-deployment issues.
- **Managed version control** with GitLab, overseeing code merging and maintaining a conflict-free codebase, ensuring smooth collaboration among team members.
- **Led data migrations** from legacy systems to the new platform, creating custom scripts to transfer and preserve critical data.
- **Implemented CI/CD pipelines** on GitLab, automating the software development process and enabling efficient code deployments.

- **Designed and deployed** a scalable AWS ECS (Elastic Container Service) architecture, leveraging AWS services like EC2, ECS, and Lambda functions for efficient service management.
- **Collaborated with cross-functional teams**, including editorial and product teams, to align development efforts with business objectives and enhance content delivery efficiency.
- **Cloud Services:** AWS ECS, EC2, Lambda
- **Development Practices:** TDD, CI/CD with GitLab
- **Achievements:**
 - Successfully refactored and modernized critical systems, improving performance and maintainability.
 - Developed and deployed a robust CMS, streamlining content management and integration with key external APIs.
 - Optimized deployment processes through CI/CD pipelines, reducing downtime and accelerating release cycles.

Senior Software Engineer (Remote) (Contract)

Gigster – San Francisco, California, United States

August 2017 – September 2020

- Led a team of software engineers in the design, development, and deployment of high-quality backend services, driving new business functionalities from conception to implementation. Ensured that engineering objectives were met through effective planning and talent allocation.
- Managed key client projects through the Gigster network, working on remote contracts for large corporations such as Walmart, Omron, EPAM, Vanguard, Victoria's Secret, Photon, and Citi Bank. Delivered solutions using Python, Lua, and JavaScript (React/Node.js).
- Showcased work at international conferences: Developed contract projects that were demoed at CES and other major events, receiving positive feedback.
- Developed core applications for assembling development teams within the Gigster network, enhancing the efficiency and quality of project delivery.
- Mentored and coached junior developers, helping them to improve their technical skills, advance in their careers, and maintain high morale. Fostered a strong sense of community and supported team members' growth both technically and emotionally.
- Enhanced coding standards and practices across the team, ensuring high-quality code output. Maintained hands-on involvement in coding, contributing 30%-60% of the codebase to remain technically proficient and provide valuable technical assistance.
- Improved team efficiency by analyzing and applying practical metrics such as individual contributor strengths, team velocity, and codebase domain expertise. Successfully addressed and isolated large-scale engineering bottlenecks, contributing to smoother project execution.
- Facilitated cross-departmental collaboration by interacting with engineering leaders, customers, and peers to share information and refine processes, ultimately driving better project outcomes.

Senior Software Engineer (Remote) (Contract)

Knoetic – New York, United States

December 2016 – June 2017

- Served as a key member of the Extractor Team, focusing on the integration and extraction of data from various HRIS APIs into Snowflake using Golang, contributing to the overall data pipeline efficiency.
- Performed regular maintenance and updates on internal tools, enhancing their functionality to better support the data extraction process and improving team productivity.
- Extracted and integrated data from APIs such as Jobvite, UKG, and Dayforce into Snowflake, ensuring seamless data flow and availability for analysis.
- Maintained and improved the configuration service developed in Node.js, providing crucial updates that optimized its performance and reliability.

Key Contributions:

- **HRIS API Integration:** Successfully extracted data from multiple HRIS systems (Jobvite, UKG, Dayforce) and integrated it into Snowflake, enabling more effective data management and analytics.
- **Tool Maintenance and Enhancement:** Regularly maintained and updated internal tools, streamlining the data extraction process and reducing development time for the team.
- **Configuration Service Management:** Managed the Node.js-based configuration service, implementing improvements that enhanced its architecture and performance, leading to more efficient system operations.
- **Technical Architecture Suggestions:** Provided valuable input on technical architecture, contributing to the ongoing improvement and scalability of the team's data extraction solutions.

Technologies Used:

- **Backend:** Golang, Node.js
- **Data Integration:** Snowflake, HRIS APIs (Jobvite, UKG, Dayforce)
- **Tooling:** Internal tools for data extraction and configuration management

Achievements:

- Improved Data Extraction Efficiency: Played a critical role in optimizing the data extraction process, resulting in faster and more reliable data integration from HRIS systems.
- Enhanced Internal Tools: Contributed to the enhancement of internal tools, significantly improving the team's ability to manage and process data extractions efficiently.
- Architectural Improvements: Provided key technical suggestions that led to improved architecture and performance of the configuration service, ensuring better system stability and scalability.

TSSE Internship Trainee

Vodafone(_VOIS) – Cairo, Egypt

April 2015 – September 2015

- Developed a **Shift Management Application**: Created a comprehensive shift management system to streamline employee scheduling using Node.js for the backend and Vue.js for the frontend. Built the mobile application with React Native, providing cross-platform access for employees.
- Backend Development: Implemented RESTful APIs and server-side logic with Node.js.
- Frontend Design: Designed and developed an intuitive user interface using Vue.js.
- Mobile App: Developed a mobile version with React Native for seamless cross-platform functionality.
- Testing: Employed Mocha and Chai for thorough backend testing to ensure reliability and performance.
- Designed and Developed "**Quick Bit**" Tool: Created a desktop application for the Internet Call Center (ICC) department to automate and streamline the process of checking line quality, retrieving customer information, and troubleshooting.
 - Automation: Reduced manual check times from 5 minutes to milliseconds by automating data retrieval and troubleshooting steps via Vodafone's Oracle Sebil APIs.
 - Troubleshooting: Implemented automated diagnostics to start line troubleshooting, detect problems, and provide solutions.
 - Router Configuration: Added router configuration features to assist agents, further reducing call time and effort.
 - Impact: Decreased average call handling time from **15 minutes** to **3 minutes** for over **1,000** agents, significantly improving efficiency and productivity.
- **Achievements**:
 - Efficiency Improvement: Successfully reduced average call handling time by 80%, leading to increased productivity and improved customer service.
 - Recognition and Promotion: Received a promotion and offers from other Vodafone departments, including **Cloud Solutions** and the **I care Team**, due to outstanding performance and innovative contributions.
 - Award: Honored with the "**Best Innovators**" award in **Vodafone's Space Talent program** for exceptional innovation and impact on operational efficiency

Backend Engineer

Fifth Dimension (5d) – Cairo, Egypt

January 2014 – March 2015

- Led backend development for multiple projects, including a complex solution like Airbnb, ensuring high performance, scalability, and alignment with business goals.
- Implemented custom architecture and utilized Architectural Decision Records (ADRs) to guide the backend team, ensuring consistent adherence to architectural best practices and standards.
- Improved organizational development standards by embodying and promoting best practices, leading to enhanced code quality and development efficiency.
- Performed code reviews and enforced coding standards across the team, ensuring high-quality, maintainable code.
- **Key Responsibilities**:
 - Architecture Implementation: implemented a backend architecture tailored to meet specific project requirements, ensuring scalability, security, and maintainability.
 - Test Suite Development: Periodically wrote and maintained comprehensive test suites using **PHPUnit**, significantly improving the reliability and stability of the applications.
 - Sprint Planning & Estimation: Played a key role in agile processes, providing accurate sprint estimations, and helping to plan, prioritize, and sequence project features to align with business objectives.
 - Collaboration with Frontend Teams: Worked closely with frontend developers using Vue.js, React.js, and Nuxt.js to ensure seamless integration between frontend and backend components.
- Accomplishments:
 - Architectural Leadership: Successfully implemented custom architecture and ensured its consistent application across all backend projects using ADRs, leading to more efficient and organized development workflows.
 - Cross-Functional Collaboration: Fostered strong collaboration between backend and frontend teams, ensuring that backend services were well-aligned with the frontend requirements, resulting in cohesive and performant applications.

.Net Developer

FrameTrack – Cairo, Egypt

October 2013 – December 2014

- Developed and maintained both **desktop** and **web** applications using **C#, ASP.NET**, and **WPF**, delivering high-performance solutions for marketing automation.
- Contributed to the [FrameTrack Social suite](#), a comprehensive set of marketing tools designed to assist marketers and clients in promoting their products and services across major social media platforms.
- Designed and implemented features for data scraping, customer targeting, automated interactions, and scheduling, facilitating streamlined and effective **social media campaigns**.

Key Projects and Products:

- **Data Scraping:** Developed algorithms to extract and analyze data from social media channels such as Facebook, Instagram, Twitter, and WhatsApp.
- **Customer Targeting:** Created advanced targeting mechanisms to identify and engage with potential customers based on demographic and behavioral data.
- **Automated Mentions:** Implemented automation scripts to interact with users through mentions and comments, enhancing engagement and visibility.
- **Scheduled Posts/Messages:** Built features to schedule posts and messages in advance, allowing for timely and consistent communication with audiences.
- **Retargeting:** Developed functionality to re-engage users who had previously interacted with the brand, improving conversion rates and customer retention.
- **Social Bot Simulation:** Engineered features that mimicked social bot behaviors for efficient interaction and engagement across various social media platforms.

Achievements:

- **Enhanced marketing efficiency** by developing versatile tools that automated and optimized social media campaigns, leading to increased client engagement and satisfaction.
- **Streamlined social media management** with the introduction of advanced scheduling, targeting, and automation features, resulting in improved campaign performance and reach.

.Net Developer

EfhamComputer – Cairo, Egypt

March 2010 – September 2013

- Developed and maintained a variety of desktop and web applications using .NET technologies, enhancing user experience and functionality.
- Built and optimized software tools for the Windows platform, addressing complex challenges involving Windows API and ActiveX controls.
- Coordinated with cross-functional teams to resolve technical issues and deliver robust software solutions.

Key Projects and Products:

- **TV 3L PC:** Contributed to the development of a comprehensive software suite for watching TV channels on Windows and Android devices. The application supports over 2000 TV channels across various categories, including Movies, TV Shows, Music, Sports, Documentaries, Radios, Kids, and News.
- **Run This V2:** Developed a tool to execute custom commands via a proxy in Windows, enabling selective opening of applications.
- **Stop Running:** Created a utility to control the execution of applications in Windows through policy enforcement, preventing unauthorized executable files from launching.
- **Speed Up Shutdown:** Enhanced Windows shutdown speed by optimizing process termination and cleaning system files.
- **Efham Internet Booster:** Developed a tool to enhance internet connection speed and performance.
- **C.W.R Controlled Restrictions Windows:** Implemented a registry manager for comprehensive control over Windows system settings.
- **Internet Control Access:** Designed a tool to block internet access with password protection for enhanced security.
- **USB Storage Controller v2:** Created a tool to manage USB device access and customize autorun settings for better security.
- **Efham Win X Menu:** Developed a customizable right-click context menu for Windows to streamline user interactions.
- **MP3 Cut:** Built an application for cutting and editing MP3 and audio files.
- **OEM Editor:** Created a tool to edit **OEM** information for customization purposes.
- **Restore Show Desktop Icon:** Developed a utility to rebuild the desktop icon database (**IconCache.db**).
- **Efham T-pic:** Designed a screen recording tool to capture and save screen activities.
- **Get Browser Passwords:** Implemented a tool to retrieve saved passwords from web browsers for recovery purposes.
- **Xpress-SMS:** Built a tool for sending international SMS messages.
- **MAC Address Modifier:** Created a utility to edit and manage MAC addresses.
- **MY Tube:** Developed a YouTube video downloader for saving videos locally.
- **Stucking HomePage Remover:** Designed a tool to remove unwanted homepages and ads from browser plugins.
- **Easy Transfer:** Built a file transfer tool for seamless file sharing over local networks.

Demonstration Videos: For a comprehensive view of the tools developed, you can access the [playlist of demonstration videos](#).

Development Skills

Programming Languages

- **PHP** [Expert]
- **C#** [Expert]
- **Lua** [Expert]
- **VB.NET** [Expert]
- **Java** [Intermediate]
- **JavaScript** [Intermediate]
- **Kotlin** [Intermediate]
- **SQL, T-SQL, HQL** [Expert]
- **Python** [Intermediate]
- **GO** [Intermediate]
- **C/C++** [Intermediate]
- **Dart** [Intermediate]

Programming Technologies

- **Laravel** [Expert]
- **Spring Boot** [Intermediate]
- **VueJS** [Expert]
- **Angular JS** [Expert]
- **ReactJS** [Intermediate]
- **Microsoft .Net Core** [Expert]
- **EF Core** [Expert]
- **Flask** [Intermediate]
- **Django** [Intermediate]
- **Apache Kafka** [Intermediate]
- **Nestjs** [Expert]
- **Drop Wizard** [Intermediate]
- **Livewire** [Expert]
- **Inertia.js** [Expert]
- **Flutter** [Intermediate]

Databases

- **Microsoft SQL Server** [Expert]
- **MySQL** [Expert]
- **MongoDB** [Intermediate]
- **PostgreSQL** [Intermediate]
- **Redis** [Intermediate]
- **Apache Ignite** [Intermediate]

General Concepts

- **OOB, OOD, OOA**
- **Algorithms & Data Structures**
- **Design Patterns**
- **AWS, GCP, Azure, Digital Ocean**
- **WHM, WHMCS**
- **CMS, CRM, ERP**
- **REST based services**
- **Database Design**
- **Security Research**
- **Docker (Containerization)**
- **DevOps**
- **TDD, BDD, ATDD**
- **System Design**
- **Solid Principles**
- **Linux**
- **SOA (Service Oriented Architecture)**
- **SAM (Serverless Application Model)**
- **Mobile Development**

Personal Skills

Languages

- **Arabic (Mother Language)**
- **English (Fluent)**
- **French (Novice)**

Education

- 2019 **Bachelor Degree of Computer Engineering, Cairo, Egypt**
- 2013 **Secondary Degree Zahraa El Andalous Private School, Cairo, Egypt**

Courses & Certifications

- CCNA
- CCNP
- CEH
- Network+

Competitions & Events

- ICPC (International Collegiate Programming Contest) 2020
- GDG (Google Developer Group) 2019
- Mutex Summit 2019
- IEEE Summit 2019
- ICPC (International Collegiate Programming Contest) 2019

Some Real-World Projects

