Full-Stack Software Engineer

Stack Software Engineer

Discover the craftsmanship of Alex, *Full-Stack Maestro*, with 20+ years of proven success in entire SDLC and developing great UI/UX for desktop, web, and mobile applications. Tech enthusiast and skilled developer, I deliver cutting-edge, user-friendly enterprise applications that cater to diverse needs. With a flair for intuitive, responsive design, I enhance accessibility and functionality, ensuring a frictionless user experience. Known for problem-solving and client-focused solutions, I push technology to its limits to ensure demonstrable impact...

…Also, avid professional hobbyist with passion

for developing practical daily-use applications, including apps for revenue/time tracking, taxes, crowd control, weather-based planning, and tutorial games for kids, transforming chores into enjoyable experiences

(sampled at [www.alexPi.ca](http://www.alexPi.ca)).

Objective

Aiming to secure a hands-on role, leveraging my expertise in crafting impactful applications and sophisticated solutions that exceed business requirements at hand, while significantly enhancing the user experience.

Technical Proficiencies

.NET, WPF, UWP, Blazor, MAUI, ASP.NET, MVC, Razor, MVVM, C#, C/C++, XAML, GPT-4, T-SQL, Microsoft Visual Studio, WWF, WCF, Web Services, RESTful API, RIA Services, WinForms, WebForms, Silverlight, Entity Framework (EF), ORM, NHibernate, JSON, AJAX, HTML, CSS, JS, Angular, ReactJS, jQuery, Google Earth, Microsoft Virtual Earth, PL SQL, DTS, ADO.NET, IIS, VB.NET, VB6, UML, Visio, SharePoint, TDD, DDD, TPL, XML, SOAP, WSDL, Win32, ATL, MFC, VBScript, JavaScript, COM/DCOM, COM+, MTS, OOP, PowerShell, Crystal Reports, MS Office Automation, Git, GitHub, VSS, TFS, SVN, Bitbucket, Windows Service, Azure Cognitive Services, Azure CI/CD, DevOps, Azure SQL DB, Azure Key Vault, Azure Web Hosting, MS SQL, ODBC, Oracle, SQLite, MongoDB, MS Access, SSMS, SSRS, SSIS, ETL, JIRA, Confluence.

Projects & Consulting Experience

 RBC CM *Full-stack Developer* 2022/12 – 2023/12

Refined the company’s core trade application by adding advanced business logic and redesigning a more efficient user permissions management system.

* Demonstrated surgical precision in bug fixing and new business logic implementation to ensure the smooth functioning of the flagship application that manages trade processes in the backbone servers of RBC.
* Streamlined various in-house chores by developing original standalone applications, incorporating modern UX styles and leveraging the latest advancements of the .NET platform.
* Recognized for my innovative approach in designing a one-click symmetrical permission editor, as well as for enhancing the user experience of widely-used in-house applications.
* Transformed disarrayed table tennis enthusiasts into self-organizing teams with a side project application. Expanded its accessibility by porting it from a WPF desktop app to cross-platform availability, including UWP, MAUI, Angular, and Blazor for hosting on Azure.
* Ported my Microsoft Teams ChatGPT bot into a standalone automated WebEx client.

*Skills:* WPF/XAML, .NET 8.0, C#, TDD, TPL, UWP, Angular 16, MAUI, Blazor, Azure, XML, XSLT, MS SQL, EF Core, ETL, GPT-4.

CI Financial logo CI Financial *Full-stack Developer* 2021/01 – 2022/10

Led the design and development of new applications and refined existing ones, bolstering team productivity with innovative tools.

* Expertly utilized .NET 6.0 (XAML, C#) / MS SQL stack for designing and implementing two big green-field desktop applications:
  + RIF-LIF Payment Calculator/Scheduler – 100x accelerator/replacer of the old Excel-based solution,
  + Database Process Launcher/Manager – innovation in action.
* Automated local code repository deliveries with a brand-new Azure's CI/CD pipeline.
* Boosted team efficiency by developing operational support apps, leveraging ChatGPT's conversational AI for real-time log analysis and a Microsoft Teams bot integration.
* Assisted in resolving bugs within the existing suite of local enterprise back-end applications.

*Skills:* WPF/XAML, .NET 6.0, C#, TDD, DDD, TPL, Java, MS SQL, EF Core, ETL, Azure CI/CD, DevOps, GPT-3.5.

A picture containing graphical user interface

Description automatically generated Iress *Full-stack Developer* 2019/11 - 2020/11

Diligently maintained and enhanced Iress Pro, the company's premier professional trading platform, with a focus on resolving bugs and developing critical improvements.

* Streamlined data flow between Iress and external clients by developing rich-UI and headless backend apps.
* Resolved highly contested RDP server access with a clever software solution (WPF + Named Pipes).
* Engineered a real-time system for monitoring logs and alerting on critical backbone process activities.

*Skills:* ReactJS, .NET Core, .NET 5.0, WPF, TDD, TPL, WCP, C#, MS SQL, EF Core, ETL, GitHub, HTML, CSS, JS, TS.

 RBC *Full-stack Developer* 2019/04 - 2019/07

Crafted and integrated [www.MoveSnap.com](http://www.MoveSnap.com)'s full-stack features using Angular, .NET Core, Repository and Unit of Work design patterns. Designed the underlying PostgreSQL database schema.

* Improved MoveSnap’s backend by designing and adding the relevant CRUD RESTful API end points.
* Revamped the MoveSnap.com landing page with fresh branding and better scalability.
* Developed an adaptive design feature that dynamically adjusts the layout to accommodate all display sizes, ranging from large desktop monitors to small mobile devices.

*Skills:* Angular, ASP.NET Core, C#, MVC, Razor, DDD, TPL, RESTful API, PostgreSQL, GitHub, CSS, HTML, TS.

 Nymi *Full-stack Developer* 2016/11 - 2019/02

Led and engaged in C# .NET app development in the predominantly embedded C/C++ shop, modernized client-facing tools by employing Windows 10 UI/UX best practices to address the dated "battleship grey" style. Streamlined cross-platform communication protocols for improved interoperability.

* Designed and kickstarted development for a range of web, desktop, and mobile apps, along with user-centric services for always-on-authentication devices.
* Engineered a counterintuitive two-way communication method between devices, connecting managed C# and unmanaged embedded C/C++ without polling, thereby conserving battery and CPU resources.
* Prototyped, implemented, and brought to production multiple mobile, desktop and web apps (WPF, UWP, PWA, ASP.NET MVC and Angular, etc.) and services (RESTful API) representing the user-facing functionality for managing all aspects of the company’s unique always-on-authentication devices.

**Skills**: .NET, C#, C/C++, XAML, MVVM, ASP.NET, MVC, Razor, TDD, DDD, TPL, RESTful API, Angular, UWP, PWA, SSMS, MS SQL, EF, HTML, CSS, JS, TS.

***When using MS Word****, click the triangles on the left to show/hide more information.*

*An example of “more information”. Must be in Edit mode to work.*

[Sciex](https://sciex.com/) Sciex *Front-end Developer* 2016/03 - 2016/11

Maintained, fixed, and evolved company’s flagship WPF application for mass spectroscopy research, securing the progress with extensive unit and UI automated testing for enhanced stability.

• Customized Framework for Integrated Testing (FIT) fixtures to manipulate controls and allow UI automation HTML scripts in applications.

• Surrounded my code with the safety net of the elaborate unit as well as UI automation tests.

• Enhanced the efficiency of the local QA team by developing several QA automation/helper applications.

*Skills:*  .NET, C#, WPF, XAML, MVVM, WCF, VS2015, SQLite, MongoDB, SVN, JIRA, TeamCity, FIT White.

 [AAVpro Ltd](https://www.microsoft.com/en-us/store/p/buscatch/9nblggh5g5z1) *Mobile Developer* 2016/01 - 2016/02

Completed a course on Universal Windows Platform (UWP) design and development. Developed multiple mobile apps, many of which are now certified and available on the Windows App Store, providing real-time updates (e.g., bus arrivals, weather) to both mobile and desktop devices.

Architected, designed, implemented, and published to Azure web application [www.alexPi.ca](http://www.alexPi.ca) featuring:

* Angular front end with custom theming and animated transitions,
* RESTful Web services layer on top of Azure SQL Database for usage tracking of the website,
* Azure CI/CD pipeline automating builds and deployments off every merge-in to the main branch of the repo,
* OCR POC based on Azure Computer Vision cognitive services ([www.alexPi.ca/#/ocrpoc](http://www.alexPi.ca/#/ocrpoc)).

*Skills:* Azure SQL DB, Azure CI/CD, Azure Computer Vision, Azure Web Hosting, Azure Key Vault, Angular, .NET Core, C#, EF6, RESTful API, WCF, UWP, XAML, MVVM, WCF, TFS.

[](https://www.bmo.com/) [BMO](https://www.bmo.com/) *Full-stack Developer* 2014/02 - 2015/12

Developed rich client and web applications for the Obligor Linking Project (OLP) project, including a datalink console and multi-stream data acquisition tool (DAQ) with an intuitive orchestration UI. Significantly contributed to the evolution of EP-Catalyst, a Silverlight-based platform widely used within the bank.

* Served as Development Lead guiding the creation of advanced applications for the OLP project.
* Creatively applied DNA sequencing algorithms, specifically the ***Levenshtein Distance***and***Jaccard Similarity Coefficient***, to streamline data cleaning procedures resulting in an astounding 85% decrease in manual tasks.
* Implemented a WCF REST service layer to meet OLP project’s distributed application needs.
* Streamlined interdepartmental approvals with a ASP.NET MVC web app that expedited To-do list processing.
* Developed a custom reporting system that delivers daily DAQ run updates via email and web-client notifications.
* On top of my daily developer’s duties, I administered Microsoft Windows Server.

*Skills:*  .NET, C#, WPF, MVVM, MVC, Razor, ASP.NET, JSON, HTML, CSS, JS, Silverlight, VS2015, SSMS, T- SQL, EF, MS SQL, Oracle, ADO.NET, Windows Service, Agile Methodology, SVN, TFS.

[mobileLIVE - EmergiTEL Group](https://www.mobilelive.ca/#/) mobileLIVE *Full-stack Developer* 2013/10 - 2013/12

Lead design and implementation of a Microsoft Lync messenger extension – a model application serving as a proof of concept demonstrating aggregate capabilities spanning several mobile technologies:

* Created responsive UI/UX relying on async and await keywords as well as the TPL constructs.
* Coded comprehensive C# API layer to the Unmanaged C++ assembly.
* Introduced smooth transitions and animations to the application’s UI. Seamlessly embedded all graphical assets representing the product’s brand into the otherwise bare controls and backgrounds.
* Increased fidelity and coding speed for MVVM design pattern by using Visual Studio code snippets.

*Skills:*  VS2012, .NET 4.5, C#, C++, WPF, MVVM, LINQ, Agile Methodology.

[Livingston International](https://www.livingstonintl.com/) Livingston International *Full-stack Developer* 2013/02 - 2013/09

Worked on design and implementation of a rich client application using latest advances in the WPF/WCF/MVVM technologies and frameworks.

• Drastically improved the application’s UI templates; reduced to the minimum the efforts of the end users in their daily use of the application.

• Aggregated multi-screen/multi-step laborious business processes into an efficient and streamlined single-page experiences with clean intuitive designs, smooth animated transitions, rich custom tooltips/mouse-overs and such.

• Reduced development time for the existing data access layer as well as streamlined data flow to/from the back-end databases without disrupting the current architecture of the application.

• Cleaned up the MS SQL databases from obvious (and not) design imperfections.

• Designed sophisticated reports using Microsoft SSRS as well as in-house developed custom tools.

• Designed and implemented an Event Subscription Management system featuring single page design manipulating a complex multi-level hierarchy of entities.

*Skills:*  .NET, C#, MS SQL, EF, SSMS, T-SQL, WPF, MVVM, LINQ, Entity Framework, Agile Methodology.

[](http://www.citigroup.com/canada/en/) Citi *Full-stack Developer* 2012/10 - 2012/12

As a part of an intercontinental (Toronto-London-New York) team, worked on a high-performance/high-throughput trading platform – a WPF application based on a MVVM design pattern, with highly configurable/customizable plug-in architecture.

• Worked on implementation of a real-time reporting system aimed at sub-second delivery and highlighting of different parameters of trading analytics data torrents: color/style-coded alerts, custom filtering, data driven triggers of action logic, etc.

• Engaged TPL (Task Parallel Library) to keep the UI/UX alive and responsive.

• Developed custom-tailored configuration infrastructure, targeted at dynamic reflection-based type instantiation and at integration with the end user preferences and corresponding clever defaults. Designed UI components providing the best user experience manipulating and fine-tuning the user preferences.

• Tamed idiosyncrasies of the third-party components irrevocably integrated into the application.

*Skills:*  .NET, C#, WPF, MVVM, LINQ, Entity Framework, SVN, Infragistics, Agile Methodology.

 Global Financial *Full-stack Developer* 2011/11 - 2012/08

* Designed and implemented several LOB applications:
  + Electronic RESP Enroller:
    - A daring replacement for the traditional paper-based enrollment process with the modern mobile Android tablet-based approach to register new applicants faster and with fewer errors.
  + Mobile RESP Calculator:
    - A tool to support the previous app by providing a quick and easy way to establish the right financial strategy for achieving the best results, facilitating quick navigation through a complex set of rules, regulations, starting conditions and ultimate goals,
    - Engaged ubiquitous modern mobile computing revolution to serve business needs,
    - Enabled touch friendly features using Android’s built-in HTML5 support,
    - Designed unique and appealing look and feel for the front end of the app with rich and intuitive functionality at one’s fingertips (sampled at linkedin.com/in/alexpigida),
    - While the analyst team had been busy with specs gathering, created the app’s prototype on 4 platforms: WPF, Silverlight, native Android and MVS, targeting mobile as well as desktop hardware.
    - “Outsourced” time-consuming complex computations to the non-UI threads using TPL (Task Parallel Library).
* Facilitating globalization and multi culture support in the MVC apps, created a tool automating translation of the whole UI to a language of choice using Microsoft Translator API. Also, added a feature automating the process of manual error correction by the non-developer language experts.
* Took ownership over the lack of a suitable task tracking tool problem and created a system featuring:
  + Creation, assignment, progress tracking and lifecycle management of the projects and tasks of the IT shop (TPM – Task/ Project Manager),
  + Mission Control Center: a UI featuring an executive view which with a single glance reflects the overall health of all the projects at hand as well as real-time delivery date forecasting component,
  + Multi-tasking component: facility for fast switching between tasks with automatic real-time time tracking,
  + Integration with the local TFS: establishing a link between jobs submitted to TFS and corresponding tasks for documenting, invoicing and accountability purposes.
* Designed and implemented a corporate screen saver featuring:
  + Animated gauges presenting corporate performance counters,
  + Unread email notifier/counter,
  + Integration with the task tracking system,
  + Optional local traffic and weather gadgets.

*Skills:* VS2010, .NET 4.0, C#, VB.NET, WPF, Silverlight, WCF, ASP.NET, MVC, Razor, HTML5, JavaScript, jQuery, HTML, CSS, JS, MS Access, T-SQL, SSMS, LINQ to SQL, EF, AJAX, TFS.

[Toromont CAT](http://www.toromontcat.com/) Toromont *Full-stack Developer* 2010/06 - 2011/11

Back to Toromont to continue working on a vast code base of the existing corporate apps ranging from the classic ASP to the latest advances in dev technologies, including ASP.NET 4.0, Silverlight and WPF, reinforced with hardcore T-SQL and third-party components.

• Designed and implemented a rich client application (WPF) for a quick and highly automated entry into the local time tracking system, integrated with TFS as well as click-once timesheet/invoice creation, review and printing. Introduced pleasing looks as well as innovative and productive experience to the otherwise tedious drudgery of keeping track of one’s work (sampled at www.linkedin.com/in/alexpigida). Result: 10 man-hour daily saving for the team.

• “Gamed” several aspects of the existing time tracking process, turning the drudgery into a fun activity which resulted in a significant financial data latency reduction. This approach also led to a significant reduction in financial data latency and resulted in a daily savings of about 5 man-hours for the entire department.

• Designed sophisticated reports using Microsoft SSRS.

• With extreme care and surgical precision extended the intricate and complex codebase of existing classic ASP as well as the latest ASP.NET applications along with the enormous T-SQL scripts.

• Ported existing classic ASP applications into ASP.NET 4.0 web form as well as Silverlight apps.

*Skills:* VS2010, .NET 4.0, C#, WPF, WCF, Silverlight, RIA, ASP.NET, ASP, jQuery, HTML, CSS, JS, SSRS, SSMS, T-SQL, LINQ to SQL, EF, AJAX, TFS.

**[CWB Group](https://www.cwbgroup.org/)** CWB Group *Full-stack Developer* 2009/10 - 2010/05

Implemented rich client application front end (WPF) as well as plumbing to and design of the back-end SQL server databases.

• Ported a set of legacy applications to the latest platforms: WPF and .NET 4.0.

• Used early Beta bits of TPL (Task Parallel Library) to “defreeze” the application during long and lengthy SQL queries and server calls.

• Mitigated risks to both present and future code updates by providing a safety net of comprehensive unit tests for the logic at hand.

*Skills:* VS2010, .NET 4.0, C#, WPF, MS Access, T-SQL, SSMS, Citrix, TFS.

[Green Shield Canada ](http://www.greenshield.ca/en-ca) Green Shield Canada *Consultant* 2008/12 - 2009/08

Participated in an effort of bringing current corporate code base of numerous web applications to the latest versions of core software libraries and contemporary security standards.

• Carried out functional refactoring of common assemblies used by multiple corporate web applications for the purpose of utilizing the latest secure technologies (SSO by AD FS and Code Access Security).

• Introduced latest coding effort-saving trends in software development, such as Dependency Injection and Unity Application Block of Microsoft Enterprise library.

• For the purpose of smoothing out the current and future software enhancements, implemented a safety net of numerous unit tests for the existing corporate applications.

*Skills:* VS2008, .NET 3.5, C#, ASP.NET, HTML, CSS, JS, WebForms, XML.

[Toromont CAT](http://www.toromontcat.com/) Toromont *Full-stack Developer* 2008/02 - 2008/11

• Using emerging geo-coding technologies (Microsoft Virtual Earth and Google Earth) prototyped a GPS-based asset tracking demo application facilitating comparison of fuel expenses between different equipment delivery scenarios.

• Capitalizing on extremely advanced user base, created a prototype of a WebParts-based dashboard application in which users can tailor layout and functionality of web pages in accordance to their unique needs, thus saving the development team from creating, maintain and supporting numerous flavors of essentially the same application.

• Introduced and prototyped an idea of a visual aggregation custom web control: graphically compacting more relevant information into a common chart using latest advances in web presentation technology (Silverlight).

• Designed and implemented a new internal web application, extending the internal corporate application framework with the latest web technologies.

*Skills:* VS2008, .NET 3.5, C#, VB.NET, WinForms, WebForms, ASP.NET, HTML, CSS, JS, classic ASP, AJAX, WPF, Silverlight, Web Services, XML, T-SQL, OOP, ORM, NHibernate, MS Virtual Earth, Google Earth, TFS.

**[BDO IT Solutions (former Systemgroup Inc.)](https://itsolutions.bdo.ca/systemgroupinc/)** Systemgroup *Full-stack Developer* 2007/02 - 2008/01

Participated in a full development life cycle of Mutual Funds Connect application for the Meridian Credit Union – a centralized information management tool that facilitates financial planning lifecycle administration and provides a seamless interface to the Wealth Management service delivery framework.

• Worked on the front end of the application – a rich smart client using the latest advances in UI development – Windows Presentation Foundation (WPF).

• Prototyped business process flow between front and back offices using Widows Workflow Foundation (WF).

• Designed and implemented a custom business rule engine – a web service application providing metadata dependent on multidimensional set of incoming conditions pertaining the financial transaction at hand.

• Came up with an idea and implemented an application loading up the business rule engine with thousands of combinations translated from free form documentation describing the business process.

*Skills:* VS2008, .NET 3.5, C#, WPF, WF, WCF, VB.NET, WinForms, Smart Client, Web Services, XML, XPATH, T-SQL, WSDL, OOP, TFS.

**[Direct Energy](https://www.directenergy.com/)** Direct Energy *Full-stack Developer* 2006/09 - 2007/02

• Using SharePoint Server 2007 and WebParts of ASP.NET, devised a way to separate business logic development from graphic design and multilingual content support.

• Designed and developed a series of custom components for customers’ sign up and sign in to the corporate website.

• Enhanced existing customer enrollment web application (a part of www.directenergy.com site) by introducing mid-tier components reflecting new business rules added to the process.

• Implemented an assembly of components with WinForm .NET 2.0 front end responsible for staging data of various formats from company’s legacy systems to MS SQL Server databases.

• Implemented an internal support application for simple and efficient bulk editing of highly volatile data associated with company’s market penetration.

*Skills:* VS2005, ASP.NET 2.0, C#, VB.NET, WinForms, WebForms, Web Services, T-SQL, DTS, SharePoint Server, SOA, WSDL, OOP.

**[Magna Cosma International](http://www.magna.com/)** Magna International *Full-stack Developer* 2005/11 - 2006/07

• Took technical lead on late stages of a project of conversion from Lotus Notes to a modern ASP.NET 2.0 business workflow application.

• Designed and implemented rich, responsive and intuitive UI using ASP.NET WebForms, AJAX technology and third-party web control libraries (Infragistics, Skelta, etc.)

• Refactored the existing complex business tier into OO hierarchy of reusable and extensible types.

• Redesigned existing disparate data code pieces into a flexible and reusable data access component.

• Developed a WinForm .NET 2.0 application for fast and efficient bug tracking, featuring automated email-based notification of assignees and real-time progress reporting capabilities.

• Automated process of converting business process specs into executable business logic by writing software capable of processing company’s documentation.

• Optimized T-SQL code to outperform existing means of data handling by two orders of magnitude.

*Skills:* VS2005, ASP.NET 2.0(1.1), C#, VB.NET, WinForms, WebForms, Web Services, T-SQL, ORM, NHibernate, SSMS, DTS, Excel, SOA, WSDL, OOP, IIS.

**Ukrainian Academy of Sciences** *Staff Scientist* 1987/06 - 1992/05

Participated in projects: “Noncooled Infrared Magneto-Injection Emitters Based on CdHgTe”, “Holographic Correction of Distortions of Acousto-Optical Modulator in Photorefractive Crystals”:

• Conducted experiments in the fields of Laser Optics and Infrared Spectroscopy.

• Developed C programs for numerical analysis of the data and graphical representation of the results.

• Published the achievements in scientific periodicals worldwide.

Education

**Microsoft Official Curriculum courses, Developmentor’s advanced classes 2001/05**

• Microsoft Certified Professional (MCP)

• Microsoft Certified Solution Developer (MCSD), Visual C++ and SQL Server tracks

**Taras Shevchenko National University of Kyiv, UA**

• Master of Science in Quantum Radiophysics and Electronics