|  |  |
| --- | --- |
| Kareem Kashwaa  Software Engineer | |
| |  |  | | --- | --- | |  | Profile As an innovative programmer with 15 years of experience, I have a strong passion for coding and a diverse skill set including C#, .NET, .NET Core, and Python. I am committed to following best coding practices and producing clean, readable code. My knowledge of fundamental algorithms and data structures, as well as clean coding principles, allows me to effectively contribute to projects while continuously learning and growing. I am excited to put my skills to use and expand my knowledge further. | |  | Employment HistorySoftware Engineer at Microsystem Controls Pty Ltd, Sydney May 2017 — Present   * Designed a ticket validation system using ASP.NET Core for the server-side API, EF Core and PostgreSQL for the database, WPF and MVVM for the configuration software, and Python on Raspberry Pi for the TVS box. This system extended the functionality of existing products by allowing them to validate barcode coupons using external data without requiring changes to their software. This was achieved by intercepting the communications between the products and the host. * Developed production tools for a new coin changing product using a combination of technologies including WinForms, C#, Oxyplot, .NET Framework v4.6, WPF/MVVM, .NET Framework Core, MSTest, and MOQ. These tools included a streamlined production utility that allowed the factory to run test procedures and initialize devices automatically, a visual tool for creating complex coin signatures, and a config creation/manipulation tool for end users. I also created an extensive unit testing project using MSTest and MOQ to simulate firmware behavior and enable parallel development of firmware and software. * Developed software using WinForms, C#, and .NET Framework v4.6 to interface with a stress testing rig through an Arduino board. The software was able to control both the testing rig and the coin validator/dispenser, implementing a complex set of rules and maintaining extensive logs about the device during the test. This allowed the device to be automatically tested through hundreds of thousands of validation/dispense cycles while recording its acceptance rate and the occurrence of undesirable events such as jams or missing coins. * Designed data collection and graphing software using WinForms, C#, Oxyplot, and .NET Framework v4.6 to facilitate config creation for coin acceptors. This software allowed users to move from manually creating coin signature files using an Excel sheet to a more user-friendly approach where parameters were displayed in the form of a 2D graph, allowing for visual modification of limits. This greatly simplified the config creation process. I also wrote a set of tools using MSTest and MOQ to simulate and automate the config test process, creating reports on the expected performance of different devices. This software was instrumental in streamlining the config creation and testing process. * Rewrote a set of legacy utility software using WinForms, C#, and .NET Framework v4.6 to handle the production and maintenance process of older coin validation devices. I analysed and documented the old source code in VC++ and built reusable libraries to handle communication and configuration of devices. I also introduced unit and integration tests to the project using MSTest and MOQ. This effort modernized the software and ensured its reliability through the use of testing.  Software Engineer at Track Solutions, Kuwait City February 2007 — January 2017   * Participated in the design of an ERP system for travel agencies using ASP.NET, C#, and SQL Server 2008 with Entity Framework for the database. The system included a portal to manage online suppliers with automatic login and data scraping capabilities, a HR portal with attendance and leave reporting connected to a network of ANVIZ EP300 fingerprint scanners and a camera surveillance portal connected to a network of IP cameras and DVRs. The system also included a customer portal connected to the back-office accounting database and an online payment link generator that integrated payment gateways with an SMS gateway. * Participated in the development of an online booking solution for travel agencies using ASP.NET, C#, and SQL Server 2008 with Linq2SQL for the database. The solution included a real-time flight booking engine connected to Galileo and Sabre GDSs and several low-cost carriers' APIs, a hotel booking engine connected to multiple suppliers, a car hire booking engine connected to Tourico Holidays' API, and a cruise booking engine connected to Royal Caribbean's booking API. The project also included a credit/debit payment gateway connected to the back-office accounting. * Developed a middleware solution that automates the capture of reservations made through various suppliers. This is achieved by utilizing the suppliers' API's to directly transfer reservation information to our back-office accounting system database. In instances where an API is not available, I implemented an alternate method that utilizes email parsing and web scraping with Selenium to collect and process reservation data. * Developed a web service that enables data exchange between our back-office accounting software and the Sabre Global Distribution System (GDS). The service, built using ASP.NET Web API, provides a REST-compliant API for the GDS to access customer information and financial data from our system. This integration allows for seamless information sharing between the two systems. * Developed a desktop application for managing insurance retailers' sales. The application, built using C# and the .NET framework, includes integration with a back-end accounting system database and features a dot matrix printing facility and reporting system. This tool allows insurance retailers to efficiently track and manage their sales. | |  | Open Source Projects  * LoadMeter: A java script library that displays the current load status of the Egyptian electricity grid and can be included in any web page (<http://kashwaa.github.io/loadmeter>). * Paste-as-file: A desktop app written in c# that adds an option to windows context menu which pastes copied text and images directly into files on the hard drive (<https://github.com/kashwaa/PasteAsFile>). * Capture: A desktop app written in c# which records a video of any part of the screen and saves it in GIF or AVI formats (<https://github.com/kashwaa/Capture>) * Facebook Group Archiver: A desktop app written in c# that downloads the entire content of any given Facebook group and saves the posts as JSON files (<https://github.com/kashwaa/fb_group_archiver>) | |  | Certification  * Microsoft Certified Professional Developer * Microsoft Certified Solution Associate   **Transcript ID (860962)**  **Access Code (kkashwaa)** | | Contact Details Map with pin with solid fill NSW, Australia  Speaker phone with solid fill 0481997252  Email with solid fill [kareem@kashwaa.online](mailto:kareem@kashwaa.online) Skills  |  |  |  |  | | --- | --- | --- | --- | | Problem Solving Skills | | | | |  | | |  | | Coding and Scripting | | | | |  | |  | | | Software Design and Development | | | | |  | |  | | | Analytical Thinking Skills | | | | |  | |  | | | Data Structures & Algorithms | | | | |  |  | | | | Source control/GIT | | | | |  |  | | |  Links LinkedIn: <in.kashwaa.online>  Github: <github.kashwaa.online> |