



---

## Summary

Enthusiastic and self-driven software engineer with 8 years of experience and passion for technology. Eager to join an organization that always strives for product excellence. Work effectively collaborating with teams, or independently as needed, to drive technology and architecture choices and deliver well-designed implementations.

---

## Career Experience

### **Senior Engineer, Cheetah Digital**

May 2019 –  
present

- As tech lead on a core initiative, successfully navigated project ambiguity to define an asynchronous integration strategy between our legacy campaign workflow and our new back end (Hive and HBase hosted in AWS).
- Worked across time zones with disparate Product and Development teams to gather requirements, implement and design the key RESTful interface between two enterprise systems. The new Interface was generic, extensible and had built in authentication and error handling. Tailored error handling of the interface also allowed for custom Splunk queries and alerts to be designed for faster and preemptive resolution of issues.
- Built advanced messaging framework using .net core microservices (deployed to Kubernetes on AWS) and DocumentDB (MongoDB) to generate messages at scale. Platform easily generated over 20 million messages per hour on a test system (~1/10 of a production server) far exceeding the required generation of 20 million messages a day.
- Researched, load tested, and rated cloud-based storage technologies (HBase, AWS S3, MongoDB, File System) against our message storage use case, ultimately presenting findings to stakeholders and making recommendations.
- Started converting all base libraries to .net standard so the platform could take advantage of new performance improvements in .net core/standard. As part of the initiative I also identified all third-party dependencies and their potential replacements.
- Designed and published open source HBase wrapper for .net core to GitHub and NuGet.  
<https://github.com/maggarwal>

### **Senior Software Engineer, Prism Software Corp.**

Dec 2012 – May  
2019

- Led web application design/implementation for company's document management application DocRecord which replaced Silverlight based client.
- Architected and Implemented REST API in SOA architecture for DocRecord, resulting in scalable and robust solution used by workflow and document processing products offered by company and utilized by customers who wanted to provide custom interface for their documents. Since all services ran independent of each other system was highly robust and resilient since critical issues in one service did not affect other services or cause platform wide catastrophic failures.
- Introduced multithreaded workflow to backend services to increase throughput. Customer production environment showed an improvement of ~3000% (~5000 document/day to 6000 documents/hour).
- Added comprehensive logging facility to the product which helped debug the issues and lead to faster resolution of the issues.
- Architected WPF application for company's workflow automation product using MVVM design pattern and MEF. Application communicated to backed web services using RESTful endpoints and had asynchronous user experience. Under my guidance a team of 3 developers built and delivered the application.
- Proposed and added obfuscation to the product to protect proprietary software and algorithms using SmartAssembly.

- Optimized document creation algorithm to process batches of requests, leading to reduced loads on the backend service and improved document creation throughput. Batching reduced the bottlenecks improving throughput ~30-35x in customer production environment.
- Replaced Windows Remoting based backend service with WCF and RESTful web services.
- Proposed and implemented asynchronous workflow in Windows based clients (WinForms/WPF) to improve user experience.
- Researched and implemented integration with third party applications (QuickBooks, Sage, Symbility, Microsoft Dynamics) to provide data exchange functionality to customers.
- Introduced and maintained CI/CD process using TeamCity and Azure DevOps. Prior, all builds were initiated manually by team leads, and only released to QA once every few weeks. Introducing "Shift Left" reduced time to resolution and time to market while improving release quality.
- Moved all the codebase from SVN to GIT and helped the team learn GIT and new code reviewing workflow.
- Introduced code review tools to improve code quality and collaboration with engineering team.

**Embedded Software Engineering Intern, Source Scientific LLC**

*Summer – Fall 2010*

- Designed the embedded system UI for a DNA based automated medical lab blood analyzer. Led the process from concept definition, through stakeholder approval, to a working prototype.

**Education**

**BS in Computer Science**

*Summer 2012*

California State University, **Los Angeles, CA.**

**Keystone University Project**

**OrderIT, Android tablet application for restaurant order processing**

- Proposed and implemented an android application to improve the productivity of waiters. This is an intuitive and challenging idea as waiters should be able to perform everyday tasks using a tablet (including taking orders, assigning seats, order customizations, receiving payments). The application is distributed in nature but needs to retain synchronization with the waiter's team members such that any waiter can assist any order. The application's benefits are many; including supplying in depth food information and photos to customers of the food before and after they have ordered.

**Technology Skills**

- **Programming Languages** – C#, Java, TypeScript, JavaScript
- **Skills** – Object Oriented Design/Programming, Debugging, Problem Solving, Managing Engineering Task/Issues, Managing Builds, Mentoring Coworkers, User Interface Design, Agile/Scrum, Time Management, IOC Containers, AOC Programming, Service Oriented Architecture, Web Services.
- **Tools/Technologies** – Microsoft Visual Studio, Android Studio, WPF, MVVM, MEF, PRISM, Git, SVN, AWS, Azure, Twilio, Jira, Bitbucket, Azure DevOps, TeamCity, Xamarin, LINQPad, SmartAssembly, Win Forms, WCF, TPL, ADO.Net, NHibernate, Dapper, ASP.Net, Restful, Active Directory, JSON, XML
- **Components** - DevExpress, Telerik, Aspose, Xamarin, Add-In-Express, IRIS & ABBYY OCR Engine's
- **Frameworks** - Angular 7, Service Stack, AngularJS, KnockoutJS, Bootstrap
- **DBMS** - MS SQL, Azure DB, MongoDB