

Daniel Corbett

Software Architect in Washington, DC
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Summary

Software architect and senior engineer with 40+ years of experience designing systems that pull disparate parts together to solve the problem at hand. Led architecture for high-volume analytics at Radian, batch processing of loan-backed securities on AWS at Five Bridges, and search and member-directory systems at AOL. Managed teams, schedules, and budgets, and mentors developers. Now uses AI-assisted development to build complex trading systems.

Skills

Languages	C#, C/C++, JavaScript, Java, SQL, ThinkScript
.NET and web	.NET 10, ASP.NET MVC, Web API, WCF, Entity Framework, Angular, HTML, XML, IdentityServer 4
Data and messaging	SQL Server, MongoDB, Neo4j, Hangfire, NServiceBus/MSMQ, RabbitMQ
Cloud	AWS, Azure
AI-assisted development	AI coding agents, software factories (Orca)
Practice	Architecture, CQRS and event sourcing, Agile Scrum, troubleshooting, team leadership, scheduling and budgeting, mentoring

Experience

PeakBot and Tr3ndy Trading	May 2024 – present
Consultant	
- Designed and developed PMZBot, which trades SPX options from the /ES “pre-market zone” (PMZ) combined with several other indicators. - Developing AiTradingBot, a simulation-only AI trading harness built on PMZBot market data, and its sign-in web app, AiTrading Strategy Studio. Versioned strategy packs run through one pipeline (features, AI decision, validation and risk gates, simulated fill, journal) for live simulation and replay. - Tested and reviewed trading bots on the PeakBot platform. - Designed and built the Trendy Elite Investments marketing website and email funnel for Tr3ndy Trading’s founder; wrote a ThinkScript indicator for Tr3ndy Trading; building automated marketing tools. - Build software factories for AI-assisted development on several platforms, most recently Orca.	

Radian / Homegenius

Dec 2018 – May 2024

Lead Software Architect and Principal Engineer

- Joined Radian through its acquisition of Five Bridges.
- Designed and built a high-throughput architecture for automated valuation models (AVMs), scaling from a handful of AVMs per minute to the entire US housing stock in hours. This made the Housing Price Index (HPI) possible.
- Evolved the architecture with the modeling team across successive AVM versions, including image support.
- Mentored engineers across the team and contributed to many other projects.

Five Bridges Advisors

Jul 2015 – Dec 2018

Lead Software Architect

- Architected a batch platform that processes the full universe of loan-backed securities on a fleet of AWS servers pulling jobs from a Hangfire backbone, replacing a more limited WCF design.
- Built an IdentityServer 4 authentication and authorization server shared by multiple applications.
- Helped migrate an ASP.NET MVC UI to an Angular single-page app.
- Ran periodic performance evaluations with recommendations across multiple applications; supported IT staff with AWS administration and troubleshooting; mentored the team in .NET and C#.

Securiport

Dec 2013 – Jul 2015

Lead Software Architect

- Provided architecture for immigration-control software (IICS) and wrote its architectural and user documentation.
- Designed and built a Neo4j graph database fusing immigration records with entities extracted from search results and country-supplied data such as tax rolls and health data; with a UI developer, delivered a Person of Interest search that lets officials assess travelers for terrorism, health, and criminal risk.
- Wrote requirements for each IICS release and worked with remote IT staff supporting in-country sites.
- Set up C# coding standards and an internal wiki for developers and remote IT staff; built prototypes and mentored developers in C#, XML serialization, Entity Framework, and LINQ.

ePals

Dec 2011 – Oct 2013

Senior Software Engineer

- Designed, built, and maintained SIS v2, a school-system provisioning application in C# using CQRS, replacing a product with severe scaling limits. Used Neo4j for the view database, MongoDB as the event store, and NServiceBus/MSMQ as the event bus.
- SIS v2 provisioned Google, Moodle, a collaboration platform, and mail services in parallel at scale.
- Contributed to a Java rewrite on Neo4j, MongoDB, and RabbitMQ, with portions in C#.

ASET Partners, assigned to DHS

Nov 2008 – Jan 2012; Oct – Nov 2013

Senior Software Engineer

- Designed and developed the eSubmissions and PCII workflow applications: ASP.NET Web Forms and MVC n-tier systems using C#, Telerik, jQuery, WCF, Entity Framework, SQL Server, Symantec Scan Engine, and EasyPDF.
- Delivered the WebEOC web services project: four WCF/SQL Server applications, including a WCF router, integrating third-party systems.

Parature

Oct 2007 – Oct 2008

Senior Software Engineer

- Led a release that brought WYSIWYG editing across the product, after evaluating WYSIWYG options for a mixed ASP and ASP.NET codebase.
- Led a six-engineer chat team replacing the chat product; ran requirements analysis and evaluated XMPP servers.
- Managed stories, tasks, and iterations in XPlanner on an Agile Scrum team.

SRA International

Dec 2004 – Sep 2007

Senior Software Engineer

- Updated a C++ application that manages root PKI certificates on end-user PCs, used heavily by the DoD to distribute new root certificates across government.
- Made the GES Portal / Defense Online registration system reliable under multi-threading, added features, and enabled user-managed certificate updates.
- Built a more reliable SharePoint/C# interface from Defense Online to WebEx; created an F5 iControl application and maintained an LDIF/PKI directory-cleaning tool in Java.

Corbett Enterprises

Sep 2005 – Dec 2006

Part-time consultant

- Built an ASP.NET web service behind a Flash front end providing inventory, pricing, scheduling, and customer-usage functions.
- Wrote C# tools to scrape tire data, merge vendor databases into a central database, and process orders.

Neurofeedback Consultants

Sep 2004 – Sep 2005

Consultant

- Replaced hard-to-use, expensive scheduling options with a custom client and web system: staff edit schedules locally and sync over dial-up, and technicians and clients view schedules online. Built with ASP.NET, C#, Access, and web services.

Independent

Jan 2000 – Sep 2004

Business owner

- After leaving AOL, owned and operated several businesses.

America Online

Mar 1994 – Jan 2000

Architect; Manager, Search Systems; Senior Developer

- Designed a scalable member directory during AOL's period of rapid membership growth and turned it into a quality product; invented its members-online feature.
- Created search and feed-factory architectures that improved reliability and scalability; the feed factory began as a profiling system I built for AOL News staff.
- Managed and mentored a team of 13 developers; handled estimates, budgeting, resource planning, and operational support; presented to management and worked with product marketing on new products.
- Built the initial chat-search prototype and worked on match-chat and dating concepts; supported the acquisition and integration of Personal Library Software and its team.
- Tools: C++ and object-oriented modeling, Sybase, Tcl, Perl, Unix, PLS search engine, ClearCase, Purify, Rational Rose.

PLS / Dow Jones

Sep 1993 – Mar 1994

Contractor

- Added parallel search to the PLS engine in C++ for Dow Jones, letting threads continue while others waited on VAX I/O, which significantly increased search performance.

ARINC Research

1990 – 1993

Senior Developer

- Built class libraries and a graphical interface (C++, Motif, X Windows, Oracle) for scheduling upgrades to military equipment used in critical missions.

Grossman's Warehouse

1989 – 1990

Contractor

- Rewrote nearly the entire accounting system in a year (C, Curses, Unify), with 10x performance gains in many areas from data entry to reporting.

DCC

1987 – 1989

Co-owner and partner

- Managed a small development team. Using an early C++ translator, built an application-builder product with a SQL layer over c-tree, and used it to deliver accounting (GL, AP, AR, inventory, PO, receiving), EDI, and manufacturing modules plus vertical apps for tour agencies, food brokerage, telephone sales, and retail.

Systems Development Corporation

1985 – 1987

Developer

- Worked on a post-office terminal, an FAA flight-center proposal, and recording-device interface software; fixed a bug in a TCP/IP driver on a small x86 Unix system.

Hughes Aircraft

1980 – 1985

Electrical Engineer

- Developed scan-converter components, managed FLIR back-end integration, managed navigation-system software development, and contributed to requirements.

Education

University of Oklahoma, Norman, OK

1975 – 1980

B.S., Electrical Engineering