Michael Kappel

Software Architect / Machine Intelligence Engineer | Python, Enterprise .NET & Applied AI Systems

Cicero, IL | (708) 230-2304 | mike@ns12.com | MikeKappel.com | github.com/MichaelKappel | linkedin.com/in/michaelkappel | nuget.org/profiles/Michael.Kappel

Considering new full-time opportunities. Info724 / Insurance724 employment ended in November 2026.

PROFESSIONAL SUMMARY

Software Architect and Machine Intelligence Engineer combining extensive recent Python backend development with 20+ years of enterprise .NET, C#, SQL, TypeScript, and Azure experience. Builds authenticated web services, FastAPI applications, database workflows, and AI integrations; connects maintainable architecture, automated testing, legacy modernization, and developer mentoring.

CORE SKILLS

Software Architecture & Enterprise Engineering
SOLID, dependency injection, repositories, REST APIs, legacy modernization, claims-based security, mentoring

Python & Backend Services
Python, FastAPI, Pydantic, WSGI, REST/JSON APIs, authentication, MySQL/PyMySQL, SQLite, pytest, deployment tooling

Machine Intelligence & Multi-Agent Systems
Agent coordination, persistent AI memory, scoped context, handoffs, edit claims, recovery, human verification

.NET & Backend
C#, ASP.NET Core MVC, Razor Pages, Blazor, Web API, EF Core, ADO.NET, WCF, VB.NET, background processing

AI Platforms & APIs
OpenAI API, LM Studio, Microsoft Foundry, Azure AI Search, embeddings, semantic search, GGUF/LLaMA tooling

Cloud & Data
Microsoft Azure, App Service, Azure SQL, Blob Storage, VMs, DevOps, SQL Server, T-SQL, transactions, stored procedures, AWS, Power BI/DAX

Front End
TypeScript, JavaScript, Angular, RxJS, HTML, CSS, XAML/WPF, responsive interfaces, QUnit

Testing & Delivery
Unit/integration testing, TDD/BDD, parity validation, CI/CD, Git, Agile, code review, test strategy

SELECTED ENTERPRISE ENGINEERING & MACHINE INTELLIGENCE

- Multi-Agent Memory and UAIX / .uai: External-agent coordination, scoped persistent context, conflict-aware edits, reviewed handoffs, recovery, and human verification through public reference implementations and tooling.
- Enterprise delivery: Modernized insurance applications in ASP.NET Core, C#, TypeScript, EF Core, and SQL Server with parity checks; delivered Microsoft Graph collaboration, logistics integrations, and cloud data workflows.
- Python architecture: Built WSGI web applications and FastAPI services across five projects, including agent memory, remote-work orchestration, restoration portals, and creative-workflow APIs.

PROFESSIONAL EXPERIENCE

Info724 / Insurance 724 | Remote Feb 2023 - Nov 2026

Sr. Software Engineer / Software Architect / Mentor

- Rebuilt a dental insurance contract-management platform using ASP.NET Core, C#, TypeScript, EF Core, Razor Pages, and SQL Server while preserving complex legacy business behavior.
- Developed Python web applications and backend services across multiple projects during Insurance724 work, including WSGI request handling, REST/JSON APIs, authentication, and role-based workflows.
- Implemented Python database and service integrations using MySQL/PyMySQL, SQLite, FastAPI, and Pydantic, with automated tests and deployment tooling.
- Created automated comparison screens, parity checks, and test coverage to validate rebuilt claims-adjudication behavior against the legacy platform before release.
- Built custom OpenAI API-backed tooling for analyzing and documenting complete C#, VB.NET, and VB6 dental and insurance software codebases, with source context, structured technical documentation, and human review checkpoints.
- Use Azure SQL across development, testing, staging, and production, with Azure Blob Storage and Azure Virtual Machines.
- Deploy and manage embedding models with Microsoft Foundry (formerly Azure AI Foundry), using Azure AI Search for semantic retrieval.

C+R Research | Chicago, IL Apr 2022 - Jan 2023

Sr. Software Engineer

- Built Microsoft Teams file-sharing and collaboration workflows in .NET Core and TypeScript using Microsoft Graph API, OAuth-aware access patterns, and enterprise directory constraints.
- Implemented Azure Blob Storage for checked-in document storage and retrieval, with Azure App Service and Azure SQL supporting development, testing, and staging environments.
- Integrated Mailjet and Mailgun messaging workflows while delivering responsive TypeScript/CSS user interfaces and dependency-injected backend services.

Xerox IT Solutions (formerly ITsavvy) | Addison, IL Apr 2020 - Mar 2022

.NET Software Engineer

- Introduced Agile practices and Azure DevOps workflows to improve team delivery, visibility, branching discipline, and release confidence; used Azure App Service and Azure SQL for development, testing, and staging.
- Restructured legacy software for unit testability, dependency injection, and practical automated testing.
- Guided TypeScript adoption and implemented QUnit-based client-side testing to improve front-end maintainability and quality.

LongTerm Software Solutions, Inc. | Warrenville, IL Nov 2018 - Mar 2020

Software Engineer / Solutions Architect / Mentor

- Used Angular extensively on corporate tax accounting software for tax-accounting workflows while providing architecture and debugging expertise across C#, TypeScript, Angular, RxJS, JavaScript, MVC, ASP.NET Core, Web API, Classic ASP, SQL Server, and legacy integration surfaces.
- Used Azure App Service and Azure SQL across development, testing, staging, and production, with Azure Blob Storage.
- Worked with CI/CD pipelines and developed automated integration testing generated from stored procedures to validate thousands of business scenarios before deployment.

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PROFESSIONAL EXPERIENCE CONTINUED

Cogent | Oak Brook, IL Nov 2015 - Present

Senior Software Engineer / Solutions Architect - platform context: VisiShipTMS.com and Transportation Management Technologies

- Architect, deploy, and support service-oriented Transportation Management Systems covering freight workflows, shipment lifecycle visibility, routing logic, and cross-platform business-rule execution.
- Use Azure App Service and Azure SQL across development, testing, staging, and production, with Azure Blob Storage.
- Built interoperable desktop/web workflows using JavaScript, TypeScript, RESTful ASP.NET services, MVC controllers, C# repositories, Microsoft claims-based security, SSO-style patterns, and SQL Server stored procedures while mentoring developers on testability and maintainable design.

TForce Worldwide (formerly RR Donnelley / DLS Worldwide) | Bolingbrook, IL Dec 2013 - Nov 2015

Lead Software Engineer / Retooling Mentor

- Led an Agile Scrum team building enterprise logistics solutions with ASP.NET MVC 5, EF6, design patterns, repository/adapters, dependency injection, and automated unit tests.
- Used Azure App Service and Azure SQL for development, testing, and staging, with Azure Virtual Machines for demos and presentations.

Motozuma.com / BoostUp.com / Quicken Loans | Naperville, IL Feb 2012 - Dec 2013

Enterprise Software Architect / Intern Mentor / CTO

- Migrated the Motozuma/BoostUp fintech savings platform, in the Quicken Loans context, from VB.NET Web Forms to a multi-tier C# MVC architecture on Windows Azure with SQL Azure.
- Integrated US Bank and Authorize.Net payment APIs while improving reliability, scalability, testability, and stakeholder-driven delivery.

FIS (formerly SunGard Financial Systems) | Lombard, IL Oct 2012 - Apr 2013

Sr. Software Engineer / International Team Lead

- Built a stock-trading application for banking clients using C#, SQL, XAML/WPF, Prism, Unity Framework, Scrum, and high-performance UI/data patterns.
- Used Azure App Service and Azure SQL for staging and testing environments.

Cognizant Softvision (formerly Magenic Technologies) | Chicago, IL May 2010 - Feb 2012

Microsoft Certified Software Consultant

- Delivered enterprise systems for equipment issue tracking and employee profile management using AJAX, WCF, layered architecture, and SQL Server stored procedures.
- Used Azure Blob Storage for image and document storage in client delivery.

Morse Data Corporation | Chicago, IL Nov 2008 - May 2010

Software Engineer

- Developed enterprise management software for merchants, publishers, fulfillment providers, order workflows, e-commerce, inventory, and high-traffic client websites.
- Modernized a C# codebase from ASP.NET 2.0 to 3.5; improved SQL Server capabilities, caching, DAL patterns, layered models, helper components, and reusable UI elements.

https://unison-ucg.com/ (Formerly UnisonUCG) | Chicago, IL Mar 2007 - Jul 2008

Software Consultant

- Built applications for the City of Chicago and Chicago Airport System using ASP.NET, JavaScript, CSS, HTML, XML, SQL Server, and Oracle.
- Created database objects including views, triggers, stored procedures, and secure XML-processing workflows while working with sensitive data under DHS airport-clearance constraints.

Consulting & Early Career / AmericanEagle.com | Chicago area Apr 1999 - Jul 2008

Software Developer / Graphic Editor / HTML Specialist

- Delivered e-commerce and data-driven web systems using ASP.NET, Classic ASP, PHP, HTML, MySQL, SQL Server, Visual Basic, template optimization, SEO collaboration, and cross-browser UI production.
- Built early web applications, reusable dynamic content, navigation, image optimization, and high-performance production HTML.

ADDITIONAL ARCHITECTURE & PUBLIC WORK

- Public tooling: Published 32 NuGet packages with 21K+ cumulative downloads; recent Python applications span LocalEndpoints.com, RemoteEndpoints.com, MemoryEndpoints.com, FireAndStorm.com, and CreativeExpansion.net.
- Intelligence724.com: Public methodology and capability context for AI integration, code intelligence, governed retrieval, legacy modernization, and bounded automation. Confidential client details remain undisclosed.
- Architecture and mentoring: Testable services, maintainable TypeScript/Angular, SQL Server data design, CI/CD, code review, and practical modernization across insurance, logistics, research, finance, and public-sector systems.

CERTIFICATIONS & COMMUNITY

Microsoft certification families: MCP, MCPD, MCSD, MCITP, MCTS, Microsoft Specialist; Certified Scrum Developer (CSD). Selected credentials include Windows Azure Developer, Web Developer 4, Database Developer 2008, and SQL Server 2008 Database Development. Credential history: learn.microsoft.com/en-us/users/michael-kappel/transcript/dloj9cy1qe0yon1.

Mentoring, code review, automated-testing advocacy, and the Software Development Community.

Full career details and project evidence: MikeKappel.com/experience/ | MikeKappel.com/projects/