Carsten Nilsson

Senior Software Engineer · C# / .NET · Product Engineering

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Senior software engineer with long-term ownership of commercial C#/.NET software and experience delivering enterprise data integrations. I turn complex requirements into maintainable products, improve performance and reliability, and use testing and practical AI tools to deliver changes with confidence.

EXPERIENCE

Senior Software Engineer · Ampler

Mar 2018 - Present

Built and evolved commercial productivity software across PowerPoint, Excel, Word, and Outlook, with primary focus on Ampler Charts. Worked hands-on in a mature C#/.NET desktop product where compatibility constraints, formatting fidelity, host behavior, and regression risk all mattered. The work centered on translating complex workflow and product needs into reliable implementation through profiling, targeted performance work, algorithmic improvements, safer exception handling, test-backed maintenance, and durable product design. I now lead practical AI adoption inside Ampler by turning real engineering workflows into reviewable, validated, AI-supported delivery habits.

- Designed a reusable caching strategy that reduced repeated expensive operations from O(n) to O(1), benefiting the product broadly and improving chart update performance by up to 20x.
- Improved automated testing and CI/CD workflows, including making tests run in parallel.
- Break down broad problems, compare implementation options, and balance immediate customer value against codebase fit and long-term complexity.
- Independently prioritize and resolve support tickets and backlog issues, weighing customer impact and recurring requests when deciding what to tackle.
- Help colleagues investigate issues by structuring the problem, creating reproducible Office documents, and comparing behavior before and after a fix.
- Built the documentation and engineering context used by colleagues for AI-assisted development, and guide the team in understanding problems before coding or prompting.

Technologies: C#, .NET Framework, WPF, Office Interop, test automation, PowerShell

Senior Analyst · Accenture

Sep 2014 - Feb 2018

Delivered enterprise implementation work across ETL, migration, and business-critical backend systems where correctness, delivery discipline, and system constraints mattered.

- Contributed to .NET ETL pipelines migrating business-critical data from IBM Db2 into a new database environment.
- Worked on a ship maintenance and management system, combining implementation with analysis and client delivery.

Technologies: C#, .NET, ETL, IBM Db2, data migration

Earlier software development roles

ClearView Trade · Student Software Developer · Feb 2014 - Aug 2014

Netcompany · Student Software Developer · Jun 2013 - Feb 2014

Infomedia · Student Software Developer · Dec 2012 - May 2013

SELECTED ENGINEERING PROJECTS

Private platform operations and infrastructure automation
Operate and improve a private homelab platform, using monitoring, deployment automation, and recovery checks to maintain its services.

- Monitor services and investigate alerts with Prometheus, Grafana, and Alertmanager, improving checks and recovery workflows over time.
- Automated a scheduled backup restore drill that checks service readiness and records recovery and cleanup results.
- Automated Prometheus alert rule delivery with validation, backups, controlled reloads, and post-deployment checks.

Practical AI engineering workflows
Operate and evolve a private AI workspace with 10+ repeatable workflows for investigation, validation, documentation, operational review, and backlog execution across Open WebUI, codex-lb, provider routing, curated knowledge, MCP/tool integrations, and evaluation prompts.

- Built repo-managed AI context flows around curated documentation, knowledge packs, validation prompts, and read-only tool access.

TECHNICAL SKILLS

Software engineering: C#, .NET, Go, TypeScript, Python, SQL, WPF, test automation, performance optimization

Delivery and operations: GitHub Actions, Docker, Ansible, OpenTofu / Terraform, Linux, Prometheus, Grafana, Alertmanager

AI-assisted engineering: Codex, tool integrations, context management, validation, and code review

EDUCATION

M.Sc. in Computer Science · Technical University of Denmark 2012 - 2014

Graduate studies in computer science and software engineering, with focus on architecture, requirements, formal methods, and a deeper technical foundation for professional software engineering.

Thesis: Development of Social Network for Local Communities using a Cloud Platform. Designed and built an Azure-based social platform for local communities to share resources and household items.

B.Sc. in IT & Communication Technology · Technical University of Denmark 2009 - 2012

Broad engineering foundation across mathematics, natural science, networks, software development, and communication technology.

Bachelor project: Building an Intelligent Controllable Home - For the Solar Decathlon House. Built an iPad-based control system for an energy-positive competition house, covering appliance control and house telemetry.

LANGUAGES

Danish (native) · English (professional)