

Thomas D. Smith  
tsmithcad@gmail.com  
Atlanta, GA | (470) 228-1918  
Portfolio: [thomas@tsmithcode.ai](mailto:thomas@tsmithcode.ai)

---

## SENIOR .NET DEVELOPER | AI | CAD SME

Experienced CAD Designer, Software Developer, and System Architect with over 12 years of expertise in CAD automation, product development, and enterprise system integration. Skilled in both imperial and metric units, and proficient in PC and Mac environments.

Proven ability to implement innovative technology solutions using Agile and SDLC methodologies, optimizing workflows and improving operational efficiency. Strong background in operations management, inventory control, and production workflows with ERP/MRP systems across multiple industries, including construction, manufacturing, and product design.

Expertise in Autodesk Inventor, AutoCAD, .NET frameworks, iLogic, SQL, and more. Extensive experience working with Kaizen and ISO 9001 auditing, driving continuous improvement and compliance.

Recognized for leadership, team building, and a results-oriented approach, consistently delivering strong outcomes in fast-paced environments. Highly organized, detail-oriented, and able to handle multiple tasks while meeting deadlines. Results-driven software engineer with 7+ years' experience in .NET development, 12 years in CAD design, and data engineering. Expert at designing scalable business applications, optimizing engineering workflows, and implementing AI-powered solutions. Proven impact across manufacturing, SaaS, e-commerce and product data management environments. Recognized for accelerating project delivery, automating manual processes, and bridging the gap between engineering and IT.

---

## TECHNICAL SKILLS

- **Languages:** C# (12/13), .NET 8/9, Python, SQL, T-SQL, JavaScript, VBA
  - **CAD & Product Development:** Autodesk Inventor, AutoCAD, SolidWorks, iLogic, Vault, Mastercam, Revit, Adobe Acrobat X Pro, Office365
  - **Frameworks:** ASP.NET Core, Blazor (Server/WASM), WinForms, ML.NET, EFCore, Webforms, WPF
  - **AI & Data:** GitHub Copilot, OpenAI, ChatGPT Plus, Grok, Gemini, RAG, Data Modeling, ETL, Power BI
  - **CAD/Engineering:** Inventor API, iLogic, SolidWorks API, AutoCAD, PTC Windchill, Epicor ERP, PLM/PDM Integration, AutoCAD, AutoLisp
  - **DevOps/Cloud:** Azure DevOps, GitHub, Vercel, Docker (basics), AWS, Firebase, Netlify
  - **Tools:** Visual Studio, SSMS, Git, PowerShell, Adobe Acrobat, LiveCharts, Chart.js
  - **Enterprise Systems, ORMs & Databases:** Navision ERP, SQL Server, MongoDB, Entity Framework, SYACC MRP, Dapper, SSMS, Made2Manage ERP
  - **Automation & Integration:** CAD Automation (iLogic, AutoLISP, Python), Web APIs, RESTful Services, gRPC, SOAP, EDI (Cleo Lexicom)
  - **Project Management & Tools:** Agile Methodologies, SDLC, Azure DevOps, Visual Studio, Git, TortoiseSVN, Power BI, SSMS, Git, Trello
  - **Leadership & Workflow Optimization:** Cross-functional Team Leadership, Process Improvement, Engineering Change Management, Lean Practices
- 

## PROFESSIONAL EXPERIENCE

### HABASIT AMERICA — CAD | CRM | PDM | ERP

Suwanee, GA | 2024–Present

Industry-leading manufacturing transformation: Orchestrated end-to-end digitalization of engineering workflows, quadrupling output and setting a new standard for product data automation.

- Spearheaded digital transformation of the special build plastic modular belt engineering workflow, leveraging
- NET, C#, and SolidWorks API with a goal to quadruple drawing throughput (from 8 to 30+ per day).
- Built and deployed a Blazor-based Drawing Number Generator and automated request processing tools, reducing manual entry errors and standardizing drawing packs.
- Integrated AI-powered parsing (LLM/ChatGPT) to automate extraction of drawing parameters from SugarCRM and email requests, eliminating repetitive data entry.
- Designed custom dashboards (Power BI, Chart.js) for KPI reporting, bottleneck analysis, and process improvement, driving measurable efficiency gains.
- Led database migration and integration projects with Epicor ERP, improving traceability and data governance.
- Collaborated with IT and engineering management to set and enforce CAD and PDM standards, supporting future PDM migration.

### **1PATH SYSTEMS — Senior Software Architect**

Atlanta, GA | Sep 2022 – Mar 2023

Legacy ERP modernizer: Delivered modular API-first architecture and technical leadership that halved project delivery time for a mission-critical platform.

- Led design and development of new modules and features for “Atlas,” a mission-critical legacy ERP system, partnering closely with a compact team of 3 developers.
- Modernized .NET Framework 4.6.2 WinForms and ASP.NET Web Forms applications, introducing robust, scalable features to support evolving business needs.
- Engineered secure Web API integrations with single sign-on (SSO), connecting Atlas to other enterprise systems and streamlining user access across platforms.
- Refactored legacy code and optimized SQL Server-backed data flows, reducing technical debt and improving app performance.
- Implemented advanced UI/UX components (Infragistics), improving user productivity and interface consistency.
- Authored comprehensive technical documentation in Markdown to streamline onboarding and support ongoing maintenance.
- Facilitated efficient collaboration and release management with Git, SourceTree, Code Compare, and Microsoft Teams (including offshore coordination).
- Managed production deployments, hotfixes, and customer-facing release notes using Outlook and integrated project tools.

Key Technologies: C#, VB.NET, .NET Framework 4.6.2, WinForms, ASP.NET Web Forms, Web APIs, SQL Server, JavaScript, TypeScript, jQuery, Infragistics, Git, SourceTree, Visual Studio, Teams.

### **DAIKIN APPLIED — Sr. IT Applications Developer**

Minneapolis, MN | December 2021 – June 2022

Industrial software guardian: Maintained, refactored, and API-enabled global legacy platforms, unlocking new automation for 500+ engineering users.

- Served as primary owner and lead developer for “Daikin Tools,” a complex suite of legacy .NET WinForms applications supporting critical engineering workflows.
- Modernized, refactored, and documented legacy codebases—improving reliability, performance, and maintainability of business-critical apps used across the company.
- Developed, maintained, and enhanced custom APIs and Web Forms integrations, introducing secure single sign-on (SSO) for streamlined user access.
- Managed on-premises SQL Server databases and IIS deployments; built data-driven features to support

engineering, operations, and analytics needs.

- Coordinated Autodesk (CAD) licensing management and introduced automation features for CAD library workflows, quickly ramping up on unfamiliar platforms (including VectorWorks).
- Led troubleshooting, debugging, and hotfix delivery for production applications, ensuring minimal downtime and fast resolution of user issues.
- Collaborated cross-functionally with business analysts, engineers, and directors to translate operational needs into technical requirements and deliverables.
- Leveraged C#, VB.NET, ASP.NET, JavaScript, TypeScript, DevExpress UI, Visual Studio, TortoiseSVN, and SourceTree for full-lifecycle development and support.
- Provided mentorship to junior developers and facilitated team knowledge sharing in hybrid and remote settings.

#### **Key Results:**

Achieved significant reduction in legacy app errors and improved uptime through targeted refactoring.

Rolled out new API endpoints enabling smoother integrations and automation with engineering/CAD tools.

Delivered on tight timelines for critical features and production fixes, earning positive feedback from stakeholders.

#### **FRY REGLET CORPORATION — Alpharetta, GA | 2017–2021**

##### **Operations Technology Specialist Mar 2019 – Sep 2021**

**AEC digital catalyst:** Drove cloud-first business process automation across operations, enabling rapid estimation-to-delivery for national projects.

- Championed digital transformation initiatives across operations, engineering, and estimation, officially transitioning from CAD to .NET and cloud application development.
- Led the full software development lifecycle for custom business apps, collaborating with Georgia Tech's Twin Engines group and D3 Technologies (TX) to design, prototype, and deliver scalable process automation tools.
- Pioneered collaborative programming and code reviews using GitHub and paired programming methodologies, building a foundation for a modern, agile dev team within the organization.
- Partnered with cross-functional teams (sales, PM, engineering, customer service) to ideate, scope, and implement technology solutions, driving measurable gains in efficiency and project throughput.
- Transitioned from the engineering department into Information Systems, establishing best practices for internal tool design, deployment, and support.

Key technologies: C#, Python, Azure, Git, SQL, Autodesk Inventor, AutoCAD, Visual Studio, .NET, and cloud-first architectures.

##### **CAD Technical Manager Aug 2018 – Mar 2019**

**Manufacturing automation leader:** Drove design-library and automation standards for large-scale infrastructure projects.

- Directed a team of designers and developers, delivering advanced design automation and custom CAD libraries for complex manufacturing projects (including wall panel systems and airport renovations).
- Oversaw technical standards for 3D assembly modeling, drawing automation, and data integration between engineering and manufacturing systems.
- Developed robust automation solutions using C#, VB.NET, and Python, and ensured alignment between production requirements and CAD output.

##### **CAD Designer & Automation Aug 2017 – Aug 2018**

**Production design automation specialist:** Delivered high-precision CAD and laid the technical foundation for all future

digital initiatives.

Delivered detailed 3D models and production drawings for large-scale commercial and architectural projects.

Automated routine drafting and drawing tasks using Inventor iLogic, AutoCAD, VB.NET, and Excel VBA, laying the groundwork for process automation initiatives adopted company widely.

Collaborated directly with engineering, fabrication, and estimation to ensure accurate, on-time project delivery.

**Major Achievements:**

- Drove transition from ad-hoc engineering tools to standardized, cloud-integrated business apps, resulting in faster estimates and project launches.
- Fostered a culture of code collaboration and agile development, upskilling the department in modern software practices.
- Successfully delivered cross-departmental solutions adopted by sales, project management, and operations teams.

**Junior CAD Designer**

**Fascinate LLC, Duluth, GA 2016 – 2017**

**Responsibilities:**

- Designed and optimized product lines using AutoCAD, Inventor, and Mastercam for high-profile clients like Carnival Corporation and
- Samsung, reducing project lead times by 20%.
- Played a key role in set and stage design projects for live events and broadcast productions, leveraging Fascinate's expertise in creative fabrication and automation for custom installations.
- Worked closely with the engineering and carpentry teams to translate design concepts into manufacturable products, enhancing production workflows and ensuring that designs met client specifications and safety requirements
- Assisted in fabricating custom components by detailing drawings for CNC and metalworking techniques such as MIG/TIG welding and plasma cutting to meet the specific needs of high-energy, quick-turnaround projects.
- Developed project documentation and distributed 2D and 3D drawings to internal teams and clients, ensuring alignment between the design and fabrication teams.
- Trained new CAD designers in company-specific design processes and software tools to maintain consistency in project delivery.

**CAD Drafter, Local FOB Administrator, Local IT Administrator**

**Interroll Group, Hiram, GA**

**November 2015 – September 2016**

**Responsibilities:**

- Created detailed 2D drawings using AutoCAD Mechanical 2015 and developed 3D models and assemblies in Inventor 2015.
- Developed part and project numbers using Product Stream and SYACC (ERP System) to ensure accurate tracking of parts and projects.
- Collaborated closely with the engineering team to communicate project plans to production workers, ensuring alignment between design and manufacturing.
- Converted DWG drawings to PDF files for archiving on the network drive and distribution to internal teams and customers.
- Trained new drafters and designers, providing guidance on software tools and company design standards.
- Created parts to meet building safety requirements, such as electrical outlet covers, ensuring compliance with safety regulations.
- Distributed drawings to customers via email, answering questions and providing technical support for product

designs.

- Alongside CAD responsibilities, I also managed local IT support:
- Provided IT administration services including network troubleshooting and hardware installation while managing local user computer/network issues.
- Imaged computers and installed user-specific software.
- Responsible for new employee orientations, ensuring proper onboarding and technology setup.
- Managed the local FOB system for building entry, including creating, deactivating, and distributing FOBS for employees.
- Troubleshoot local user computer/network issues and performed hardware installations (RAM, hard drives, etc.).
- Retrieved quotes from vendors and confirmed receipts with finance and accounting for accurate budget tracking.
- Implemented an 18+ camera surveillance system to enhance building security.
- Assisted in implementing Kaizen process improvement strategies, optimizing production workflows and improving overall efficiency.

### **CAD Technician, Engineering Department Assistant, Website Designer/Manager**

**Carson Tool & Mold, Kennesaw, GA**

**February 2014 – December 2014**

#### **Responsibilities:**

- Designed plastic parts and molds, creating 3D and 2D dimensional drawings for customer approval, ensuring manufacturability and cost savings.
- Created high-precision molds using Pro/E Wildfire (PTC Creo), supporting complex manufacturing processes.
- Translated and converted legacy 2D AutoCAD data into SolidWorks/Pro E parts and drawings, distributing data to CNC/EDM programmers and operators.
- Conducted Undercut Analysis and Mold Flow Analysis to optimize design efficiency and production quality. Led prototype creation, coordinating materials and supplies required for production.
- Contributed to an ISO 9001 audit, ensuring compliance with industry standards.
- Managed and maintained the company's website, developing new content and creating company forms and documents. Operated various machinery including mills, grinders, sandblasters, and "hole poppers" to support production needs.
- Provided IT support, organized project files with Dropbox, and upgraded software and operating systems for office use. Assisted toolmakers and machine shop workers in interpreting CAD drawings to ensure precise execution.
- Created marketing materials including an ad for the American Mold Builder Association catalog and improved the Carson Tool & Mold PowerPoint presentation.
- Converted company documents into PDF forms for improved accessibility and distribution.

### **CAD Technician, Website Manager, IT Technician, Project Assistant Manager, Website Designer**

**Essential Dental Care & Sapien R&D, Grand Prairie, TX**

**November 2012 – January 2014**

#### **Responsibilities:**

- Designed CAD models for surgical dental instruments using SolidWorks, playing a key role in the development of the Sapien Root Remover Kit.
- Communicated with manufacturers to ensure the design, production, assembly, and fulfillment of parts and orders, while adhering to regulatory compliance.
- Led prototype creation efforts to support the development of cutting-edge dental tools.
- Provided IT support, managed the office's data backup system, and ensured smooth operations of all technical systems.
- Developed and maintained the company's websites, Essentialdentalcare.com and Sapienrd.com, improving

online presence and customer engagement.

- Managed and maintained a custom database used to oversee Sapien Research and Development, an organization recognized in the dental community for the Sapien Root Remover System.
- Contributed to project management by coordinating with cross-functional teams, ensuring timely completion of tasks and smooth project flow.

**CAD Technician, Material Consultant, Project Manager**

**Nimiety Bio Company, Grand Prairie, TX**

**November 2012 – 2013**

**Responsibilities:**

- Specialized in prototype creation using Pro-e Wildfire 5 and SolidWorks 2012, designing specialized instruments to test gases in substances.
- Led a team of 3 employees, overseeing the design and development of specialized instruments for gas testing projects.
- Responsible for material selection, sourcing manufacturers, and managing project files to ensure organized and efficient workflow.
- Played a key role in guiding the project to completion by managing timelines, resources, and technical deliverables.
- Cashier, Membership Desk, Greeter, Warehouse Associate

**Costco Wholesale, Gaithersburg, MD**

**April 2011 – June 2012**

**Responsibilities:**

- Trained across multiple departments, demonstrating adaptability and a fast-learning curve.
- Delivered speedy customer service as a front-end cashier and food court cashier, ensuring a positive experience for all customers.
- Assisted customers with membership services, including renewals, replacing lost cards, and addressing membership-related inquiries.
- Stocked the warehouse after hours, ensuring shelves were well-organized and prepared for the next day's operations.
- Acted as a greeter, welcoming customers and providing them with necessary assistance upon entry.

## AI, AGENTIC SYSTEMS & EMERGING TECHNOLOGIES | Self-Study & Open Source 2020–Present

- Dedicated 1,000+ hours to independent study and rapid prototyping across the latest AI, LLM, and automation trends—translating self-learning into real-world results.
  - Researched, implemented, and iteratively improved workflows using OpenAI (GPT-3/4, DALL·E), Google Gemini, Grok, Anthropic Claude, RAG (Retrieval-Augmented Generation), and agentic orchestration frameworks.
  - Designed and deployed hobby and experimental projects leveraging LLMs and generative AI for document automation, code generation, image synthesis, data extraction, and process optimization.
  - Built, tuned, and benchmarked agentic multi-step workflows, integrating LLMs with custom code, MCP servers, and cloud APIs for intelligent automation across business and creative use cases.
  - Applied knowledge from dozens of technical books, research papers, and online coursework, driving continuous growth and cutting-edge awareness in AI, prompt engineering, and workflow automation.
  - Maintained hands-on familiarity with bleeding-edge tools, Python and C# AI SDKs, custom RAG pipelines, and end-to-end LLM deployment on private/local infrastructure.
- 

## EDUCATION

Montgomery College – Germantown, MD Computer Science & Engineering Coursework

- Completed advanced coursework in computer science, engineering, and mathematics

Tarrant County College – Grand Prairie, TX Computer Science & Mathematics Coursework

- Dean's List honored for Academic Excellence

Watkins Mill High School – Gaithersburg, MD Diploma, Project Lead the Way STEM Program

- Graduated in 2008, Honor Roll student
- 

## CERTIFICATIONS

- 78 LinkedIn Learning Certifications (Technical & Leadership Courses)
- 

## SELECTED ACHIEVEMENTS

- Increased CAD drawing delivery by 400% via process automation (Habasit America, 2024)
  - Automated data extraction from 1000+ legacy drawings, improving search speed 10x (Fry Reglet)
  - Designed and implemented AI-powered parameter extraction for unstructured CRM/email data (2023–2024)
  - Reduced engineering project turnaround by 50% through .NET automation and database integration (1Path)
- 

## PROJECTS & GITHUB

- GitHub: [github.com/cadguardian](https://github.com/cadguardian) (sample code, AI/CAD automation, dashboards)
  - Portfolio: [tsmithcode.ai](https://tsmithcode.ai), [www.youtube.com/@tsmithcad](https://www.youtube.com/@tsmithcad)
-

References available upon request