

## SOFTWARE ENGINEER

# Brandon Temple

Software engineer focused on automation and data systems, building desktop and web tools with C#, .NET, Python, SQL, JavaScript, and APIs. Experience designing reporting workflows, file-processing utilities, metadata tools, and API-backed internal systems for operational teams.

Starkville, MS   btentert@gmail.com   brandontemple.com   github.com/bt1142msstate

## PROFESSIONAL EXPERIENCE

### Software Engineer (Data Systems) / Technology Coordinator

MSU Libraries, Mississippi State University | Starkville, MS | Aug 2024 - Present

- Built automation and reporting tools in C#, Python, Perl, SQL, JavaScript, HTML, CSS, and shell scripts to streamline file processing, metadata extraction, data export, and staff workflows for MSU Libraries and Mississippi Library Partnership operations across 12 library systems and 76 branches/campus libraries.
- Developed Query, a browser-based reporting system with configurable filters, API-backed payloads, report history, and Excel export for live library item data.
- Created MetaTable, a WPF metadata scanner for large directory trees with real-time progress tracking and structured Excel exports.
- Translated staff and member-library requests into SirsiDynix API/SQL integrations, documented support workflows, and Excel reports while communicating technical tradeoffs clearly to nontechnical users.
- Applied AI-assisted engineering with C# and C++ systems fundamentals, data structures, debugging, and code review to validate generated code for correctness, performance, and maintainability.

## PROJECTS

### MetaTable

WPF File Metadata Scanner | C#, .NET 9, EPPlus

WPF scanner for large directory trees; extracts file metadata, tracks progress, and exports structured Excel reports for MSU Libraries.

[github.com/bt1142msstate/MetaTable](https://github.com/bt1142msstate/MetaTable)

### HTMLConverter

WinUI 3 Batch PDF Converter | .NET 8, WebView2

WinUI 3 app for batch converting HTML files, folders, and ZIP archives to PDF with drag-and-drop intake, scaling controls, and output archiving.

[github.com/bt1142msstate/HTMLConverter](https://github.com/bt1142msstate/HTMLConverter)

### Query

Browser-Based Report Builder | JavaScript, HTML, CSS, ExcelJS

Browser-based MSU Libraries reporting tool with configurable filters, structured API payloads, report history, and Excel export.

[github.com/bt1142msstate/Query](https://github.com/bt1142msstate/Query)

### Ady Resolver

Mississippi Address Resolution Toolkit | Python, Machine Learning

Python address-resolution toolkit and local browser app using cached public data, staged matching, typo-heavy evaluation data, and lightweight ML.

[github.com/bt1142msstate/Ady-Resolver](https://github.com/bt1142msstate/Ady-Resolver)

### connect4-ai

Browser-Based Game AI Demo | JavaScript, Minimax, Alpha-Beta Pruning

Playable browser game AI with minimax, alpha-beta pruning, replay tooling, experiment modes, and headless validation.

[github.com/bt1142msstate/connect4-ai](https://github.com/bt1142msstate/connect4-ai)

## TECHNICAL SKILLS

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**Languages & UI** C#, Python, Perl, SQL, JavaScript, TypeScript, HTML/CSS, XAML, C++

**.NET/Desktop** .NET 8/9, ASP.NET Core, WPF, WinUI 3, Windows App SDK, WebView2

**Data & APIs** SQL Server, PostgreSQL, EF Core, REST APIs, SirsiDynix APIs, CGI, JSON, MARC, CSV/XLSX Workflows, Record Linkage

**Libraries** EPPlus, ExcelJS, MetadataExtractor, ImageSharp, AutoNumeric

**Tools & Delivery** Git, GitHub Actions, Visual Studio, VS Code, Postman, MSTest, Python unittest, ESLint, Playwright, Make, PowerShell/Shell, CI/CD

**Methods & AI** Data Structures, Algorithms, TDD, Agile, AI-First Engineering, Code Review, Automation, Machine Learning

## EDUCATION

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### Master of Science in Software Engineering

Mississippi State University | Aug 21, 2024 - May 2027 (Expected)

Starkville, MS | GPA: 4.0/4.0

### Bachelor of Science in Computer Science, Cum Laude

Mississippi State University | Aug 18, 2021 - May 10, 2024

Starkville, MS | GPA: 3.68/4.0

Honors: Phi Theta Kappa, Gamma Beta Phi

### Associate of Arts in Computer Science

East Central Community College | Aug 12, 2019 - May 7, 2021

Decatur, MS | GPA: 3.85/4.0

Honors: Phi Theta Kappa, Gamma Beta Phi

President's List: Fall 2019, Spring 2020

Dean's List: Fall 2020

C++ Programming Award

Outstanding ECCC CS Student Award, awarded by Mississippi State University (custom cowbell)

## ADDITIONAL EXPERIENCE

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### Community Assistant

College View, Mississippi State University | 2022 - 2024

- Supported student residents through communication, policy enforcement, community operations, and incident response.
- Served a 600+ student residential community through crisis response, resident support, and escalation coordination.
- Coordinated resident support workflows while balancing graduate-level software engineering coursework.

### STEM Leader & Math Tutor

Afternoon Adventure Learning Center | 2018 - 2021

- Tutored students in math, science, and technology.
- Prepared students for exams and improved study strategies.
- Designed engaging STEM activities with staff.

### Computer Science Lab Monitor

East Central Community College | 2019 - 2020

- Maintained and troubleshoot lab computers and systems.
- Assisted students with technical issues and software use.
- Supported problem solving and computer literacy.