

TYLER BARTHEL

SOFTWARE DEVELOPER

CONTACT

✉ tylerbarthel@gmail.com
📍 Sioux Falls, SD
🌐 linkedin.com/in/tylerbarthel
tylerbarthel.dev

SKILLS

PRIMARY

Backend Development

· .NET (C#) · SQL · Orleans · ASP.NET
· Architecture (distributed / cloud)

Cloud / AWS

· CloudFormation · RDS (Postgres/Aurora)
· Docker · ELK · ELB · EC2

Frontend Development

· Flutter · XAML (WPF/Xamarin)

FAVORITES / INTERESTS

· Flutter · .NET · Cloud · Architecture
· UI/UX/Graphic Design · Supabase
· Music · Guitar · Powerlifting

ENTREPRENEURIAL

FOUNDER

🏢 **Kotacode, Sioux Falls, SD**
Development, UI Design, Graphic Design
✂ *Flutter, .NET, web, and graphic design*

- Creative outlet for trying new things
- Recent passion is an app for managing powerlifting meets - lifter.app
 - Flutter (Dart) / Supabase
- Designed product packaging, ads, and website for outdoor company
 - Affinity Designer / Shopify

EDUCATION

SOUTH DAKOTA STATE UNIVERSITY

B.S. Software Engineering

SENIOR PROJECT

Redesign Field Inspection Vehicle Control System
Mech. inspection vehicle for military cannons

STUDENT SOFTWARE DEVELOPER

🏢 **Daktronics, Brookings, SD (video engineering)**
✂ *DirectX - DirectShow - C++*

- Integrated video player API with display controller for live event production

SOFTWARE ENGINEERING INTERN

🏢 **OEM Worldwide, Watertown, SD (firmware)**
✂ *USB HID - LabVIEW*

- Created application to read sensors over USB HID protocol for embedded device tests

EXPERIENCE

SENIOR SOFTWARE ENGINEER

MAR 2019 - PRESENT

🏢 **CentralSquare Technologies, Sioux Falls, SD**
Public Safety - Law Enforcement - CJIS
✂ *.NET (C#, Xamarin) - Microsoft Orleans - Architecture (distributed / mobile)
PostgreSQL - AWS (CloudFormation, RDS, Docker, ELK, etc.)*

- R&D for multi-tenant real-time distributed mobile platform product
- Created load testing framework to simulate production load and beyond to identify bottlenecks by stress testing server code
 - Identified code that was causing 30% excess RDS CPU
 - Exercise architectural changes and viability (i.e. partitioning) prior to production (pre/post release testing)
 - Reduced AWS cloud costs by identifying architecture bottlenecks and inefficiencies
- Reduced AWS cloud costs by migrating vanilla Postgres and sharding with Aurora to use smaller instance sizes
- Rearchitected syncing of document relationships (links) which eliminated years of reports of missing data on mobile devices
- Improved security by utilizing reverse proxies after load balancers to define FIPS approved list of TLS ciphers

SENIOR SOFTWARE ENGINEER

NOV 2014 - MAR 2019

🏢 **Wells Fargo, Sioux Falls, SD**
Banking - Student Loans
✂ *.NET (C#) - WPF - Architecture - DB Design (SQL Server)
Project Management - Technical Mentor*
🏆 Received 3 highly prestigious Gold Coin awards for innovative solutions

- Developed common application framework built upon WPF and heavily influenced by Material Design.
 - More efficiently create quality projects that well exceeded the typical low standard of enterprise client UI applications
- Create production monitoring app reducing error rate 80%+
Rearchitected borrower income and verification
 - Improved accuracy and efficiency of collecting income data
 - Converted millions of existing applications to new architecture
- Created real-time application status pipeline using message queues
Mentor for other developers providing technical training and advice
- Created project management application utilized for allocating and managing resources and capacity
- Created UI mocks, prototypes, and architecture designs for business requirements

SOFTWARE DEVELOPER

DEC 2012 - NOV 2013

🏢 **Zuercher Technologies, Sioux Falls, SD (public safety)**
✂ *C++ (Qt) - Python - PostgreSQL - N-DEx (NIEM) FBI Data Sharing*

- Created N-DEx data hub and formatter (Incident/Arrest)

SOFTWARE DEVELOPER

JUN 2010 - DEC 2012

🏢 **Innovative Systems, Mitchell, SD (telecom)**
✂ *.NET (C#) - WPF - SQL Server*

- Rearchitected usage and billing to handle larger telecoms usage data