TYLER BARTHEL
SOFTWARE DEVELOPER

CONTACT

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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 · 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