

S. Zach Bagley
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EDUCATION

Master of Science, Information Systems — Emphasis in Software Engineering

Provo, UT

Bachelor of Science, Information Systems

Aug 2021 – Apr 2026

Brigham Young University – Marriott School of Business

- GPA 3.85
- ACT 33 (98th percentile)
- Association of Information Systems
- BYU Marriott School Dean's List

EXPERIENCE

Software Engineering Intern

Idaho Falls, ID

Melaleuca, Inc.

May 2025 – Aug 2025

- Developed a modular system for retrieving profile data across 20 C#/.NET APIs and several Microsoft SQL Server databases, reducing API and database calls by up to 80% in 75% of cases, improving performance and infrastructure load
- Designed and implemented partial profile update and caching using Kafka consumers, enabling targeted cache refreshes to lighten processing load
- Built a C# console app and supporting API routes to streamline PDF generation and storage of customer enrollment data; utilized application in automated jobs with JAMS
- Improved maintainability and efficiency with comprehensive unit tests and by auditing repositories for deprecated code

Software Engineer

Provo, UT

BYU J. Reuben Clark Law School

Apr 2024 – May 2025

- Led backend development team for law.byu.edu and other BYU Law sites, implementing secure handling of user data and access control measures, including SSO and MFA
- Configured and maintained secure cloud architecture for law.byu.edu and cpcr.byu.edu (AWS: ECS, Lambda, RDS)
- Enhanced security, functionality, and maintainability of BYU Law's internal information system's Node.js backend and MySQL database through refactoring of code architecture
- Implemented Next.js into law.byu.edu's React frontend

Teaching Assistant (Data Communications & Enterprise Application Development)

Provo, UT

BYU Information Systems

Sep 2025 – Present

- Contributed to curriculum development and student assistance in topics related to data communications (especially TCP/IP networking) and application development (particularly with ASP .NET)
- Evaluated projects including code repositories, AWS infrastructure stacks, and full development projects

IT Specialist

Provo, UT

BYU Department of Continuing Education

Sep 2023 – Apr 2024

- Managed system privileges, network configuration, and access control for DCE's appx. 800 employees, including compliance with organizational security policies
- Resolved technical issues to support secure and efficient IT environment
- Configured and maintained computer workstations

PROJECTS & SKILLS

- **Portfolio:** Full-stack projects including alternative social media platform (C#/.NET backend, Swift iOS frontend) and AI storyboarding API (JavaScript/Node.js). See these projects and more at zachbagley.net/projects
- **Programming languages** (ordered by proficiency): C#, JavaScript, SQL, Swift, Python, PHP, Java, C++
- **Frameworks, Libraries, Tools, etc.:** .NET Core, Express (Node.js), SwiftUI, React, relational databases (MySQL, SQL Server, PostgreSQL), Vapor, Laravel, Vue, MongoDB, Snowflake, DBT
- **AI Tools:** Claude Code, Cursor, GitHub Copilot
- **Cloud & DevOps:** AWS (EC2, ECS, RDS, CloudFormation, S3, Lambda); Docker; CD/CI (CodePipeline); Git/GitHub; Azure Devops
- **Security:** IDS/IPS (Suricata, Zeek, Snort); vulnerability & penetration testing (Nmap, Nessus, Metasploit); network analysis (Wireshark); Kali Linux