

# Brett G Rowberry

(571) 294-9757 • brett.rowberry@gmail.com • linkedin.com/in/bretttrowberry • brettrowberry.com

## Experience

---

### Splash Financial, Cleveland, Ohio, Remote

#### Engineering Manager, Post Approval (POA)

November 2024-Present

- Formed POA team with 1 underwriting engineer. Grew team to 5 backend and 2 frontend engineers (1 contractor)
- Enabled remaining 4 underwriting engineers to focus on retiring third-party loan origination system (LOS) and POA engineers on disbursements, servicing, and direct credit card payoff
- Oversaw move of Splash's largest personal loan lender from their own servicing to Splash's to increase revenue per loan and decrease delinquency rate
- Increased revenue per loan by  $\frac{1}{3}$ , improve in-house servicing capabilities
- Oversaw build-out of in-house servicing portal to replace third-party portal to reduce borrower login friction and improve telemetry of user actions like changing due date, adding payment methods, and making payments
- Conducted 60 interviews for backend engineering candidates

#### Engineering Manager, Underwriting

October 2023-March 2025

- Oversaw final 1 ½ year project to replace third-party LOS with an internal one to improve security, efficiency, flexibility, and cost
- Oversaw development of a portal for lending partners to access data about loans relevant to them
- Onboarded second largest personal loan lender and onboarded as the first lender to use Splash's in-house servicing
- Vetted SaaS partner for loan servicing
- Transitioned student loan refinance underwriting from third-party to in-house underwriting platform

#### Engineering Manager, Verifications & Fraud Prevention

October 2022-October 2023

- Automated income verification for about 40% of personal loans by helping transition credit model from net to gross income and by using The Work Number as a data source
- Accelerated micro service development by continually maintaining template, including adding Swagger, and post-deployment checklist
- Made microservice data available for analytics in Snowflake via Fivetran
- Split team, including VictorOps on call rotation, Jira project, Confluence spaces, onboarding guide
- Brought product management into GitHub
- Managed three different teams, including promoting, managing out, and coaching under-performers
- Ran Lunch 'n' Learns and Architects Meetings
- Facilitated four book clubs (Accelerate, Atomic Habits, Measure What Matters, Staff Engineer)
- Hardened automated TransUnion credit report fetching, storage, and certificate management procedure
- Minimized ECS Fargate memory and CPU usage
- Got Clojars added to AWS CodeArtifact
- Extended auto-underwriting rules engine with conditional rulesets

#### Team Lead, Senior Software Engineer

February 2021-December 2021

- Introduced working agreements to team, spread throughout engineering
- Wrote team onboarding process and team lunch, and book buying policies
- Proposed uniform architecture for subscribing to third-party webhooks: API Gateway, SNS, SQS
- Wrote Clojure microservices to accelerate student loan underwriting and increase conversion for:
  - Education using National Student Clearinghouse
  - Identity (from drivers license or passport images) using Orolus
  - Net income using Plaid Assets
- Introduced team to functional approaches to unit testing
- Prevented PII leaks in logs and alerts by introducing Malli assertion library
- Improved ad hoc testing by introducing Postman collections in version control
- Reduced onboarding time through DataGrip config files in version control
- Accelerated microservice development by improving Terraform bootstrap package for ECR and CodeDeploy

#### Software Engineer

April 2020-February 2021

QuickenLoans, Detroit, Michigan

- Optimized CircleCI pipelines, saving 80 engineering hours per month
- Created 'dotnet new' microservice template for use by entire division with ASP.NET Core and Kafka
- Implemented several features in microservices using
  - F# on .NET Core 2.2 & 3.1
  - Kafka
  - Docker EE

- SQL Server
- Redis
- Introduced and standardized usage of .gitignore and .editorconfig across repositories
- Piloted and taught how to change the main branch of a git repo from 'master' to 'main'

## Software Engineer

February 2016-April 2020

ExxonMobil Technical Computing Company, Spring, TX

- Added new pages to web app written with Flask and React
- Held a JS training class based on the book YDKJS
- Of the 6 quarterly internal CODE Conferences, organized 1, hosted 2, became president of CODE organization, spoke at remainder with great reviews
- Implemented portal for creating Azure Storage Accounts and issuing and revoking SAS tokens using Giraffe and .NET SDKs for Azure (.NET Core 2.1-2.2)
- Created authorization API using Azure AD and Microsoft Graph API with a hybrid of C# ASP.NET and an F# library for filtering groups (.NET Core 2.1-2.2)
- Created F# XML and CSV parsers that modernized .NET and native C++ geodetics libraries and reduced product update lead time from 6 months down to days (.NET Framework 3.5-4.7)
- Designed and implemented system to offload petabytes of files from company LAN to Azure Storage to improve searchability
- Developed API to connect vendor oil well HTTP API with on-premise database API, reducing acquisition time from weeks to minutes
- Enhanced API resiliency with retry policies using Polly
- Architected and programmed cross platform test framework for evaluating data and logic
- Improved developer awareness of F# by offering two F# trainings
- Built CI/CD pipelines incorporating cross-platform builds, unit & integration tests, static code security analysis, and dynamic security analysis to reduce software delivery lead times
- Created CI/CD pipeline to aid in refactoring legacy Windows Forms app
- Utilized Agile Scrum and SAFe to improve predictability of releases
- Developed ASP.NET MVC web app to manage SQL Server database, centralizing data used to manage cost-sharing agreements (.NET Framework 4.6.1-4.6.2)
- Collaborated with developers in Malaysia and SMEs in the United Kingdom, Australia, and the US
- Leveraged OSS for project work: VS Code, FSharp.Data, FsCheck, and SQLProvider
- Maintained in-house system for provisioning Oracle/SQL Server databases and web servers
- Performed UCD/UX research for rewrite of in-house logging framework and backend services
- Researched outage notification solutions for corporate project team, recommended StatusPage

## Robotics Research Intern

May-August 2014

Institute for Human and Machine Cognition, Pensacola, FL

- Developed, tested, debugged, and improved in-house Java software for Boston Dynamics' Atlas and NASA's Valkyrie humanoid robots

## Graduate Assistant

October 2013-December 2015

University of West Florida, Pensacola, FL

- SmartHome Wireless Technologies Researcher
  - Developed Java RFID sensor agent for Raspberry Pi with a microcontroller and antenna
  - Built Swift iBeacon software agent for iOS
- Artificial Intelligence Group Coordinator
  - Managed laboratory, organized group meetings, and created web and print materials
  - Helped students program C++ path finding algorithm for iRobot Create, winning Student Research Symposium in Computer Science category
- UWF Computer Science Website Administrator
  - Transitioned CS Department website to TerminalFour CMS
- Swarm Robotics Research Assistant
  - Worked to develop swarm robotics platform based on Arduino and behavioral algorithms

## Education

### MS Computer Science

December 2015

University of West Florida, Pensacola, FL

- C, UNIX, algorithms, OOP, Java, databases, software design & engineering, iOS
- GPA, 3.98/4.0
- Fall 2015: Graduate Assistantship-Grader, Web Administrator, Graduate Merit Scholarship
- Summer 2015: Graduate Assistantship-Data Structures & Algorithms I, UWF Graduate Grant

- Spring 2015: Graduate Assistantship–Network Fundamentals and Data Structures & Algorithms I & II, Outstanding Graduate Student Award–Dean’s Office Scholarship, President Latter-day Saint Student Association–Event of the Year & largest known service project in UWF history in conjunction with Pensacola, FL Stake, Church of Jesus Christ of Latter-day Saints
- Fall 2014: Graduate Assistantship – Algorithms in C & SmartHome Research Assistant, Who's Who Among Students in American Universities & Colleges, CS Graduate Merit Scholarship, UWF Graduate Grant
- Spring 2014: Graduate Assistantship – AI Research Group Coordinator - Led undergraduates in programming iRobot Create robots for UWF Student Scholars Symposium, won Computer Science Department award, Graduate Merit Scholarship, ITGulfCoast Scholarship

## **BS Mechanical Engineering**

**June 2013**

Brigham Young University, Provo, UT

- University Honors, GPA 3.73/4.0 | President of Biomedical Engineering Club
- Half and full-tuition academic scholarship (8 semesters), Robert K. Thomas Scholarship, ORCA Grant
- Co-authored paper in an ASME journal
- NCEES Fundamentals of Engineering (Mechanical Engineering): Passed

## **Global Leadership China Study Abroad, China**

**May-June 2013**

- Studied globalization and Chinese culture and language at Nanjing University

## **Capstone Project**

**September 2012-April 2013**

- Led team of 6 MechE and ChemE students to develop a functional 3D printer that produces human vocal fold models with spatial resolution < 1 mm in a few hours, composed of 4 unique silicone materials with no visible air bubbles for under \$3000

## **Crocker Innovation Fellows**

**January 2011-December 2012**

- Selected as a member of the inaugural class to study business, product design, web design, human interface, entrepreneurship, ethics, and law in interdisciplinary teams to bring products to market

## **Global Product Development Study Abroad, Europe**

**April 2010**

- Studied design and manufacturing in the US, England, France, Luxembourg, the Czech Republic, and Hungary

## **Skills & Awards**

---

- Languages: Clojure, F#, C#, Bash, PowerShell
- DevOps: GitHub Actions, CircleCI, Azure DevOps, Terraform
- OSes: macOS, Linux, Windows
- Databases: PostgreSQL, MySQL, Snowflake, Oracle, SQL Server
- Eagle Scout, Duke of Edinburgh Bronze Award, Young Australian of the Year Award

## **Community, Conferences, and Coursework**

---

- [F# documentation](#)
- F# Advent blog posts: [2018](#), [2019](#), [2020](#)
- Conference speaker
  - Southern Fried F# 2019
  - FableConf 2019
  - Open F# 2019
- Conference attendee
  - Microsoft Build 2019
  - Open F# 2018
- Mentoring: F# Software Foundation, mentor once and mentee twice
- Course work
  - Programming Languages (COP 4020)
  - Networks (Sys & Net II) (COP 4635)
  - Operating Systems (Sys & Net I) (COP 4634)
  - Algorithm and Program Design (COP 3014)
  - Data Structures I (COP 3530) & Data Structures II (COP 4534)
  - SE Foundations: Java (COP 5007)
  - SE Process (CEN 6016), Software Design (CEN 6064), SE Practice (CEN 6095)
  - AI (CAP 5600), Software Agent Development in Sensor Networks (COP 5905)
  - Theory of Computation (COT 5205), Computer Organization (CDA 3101)
  - DB Systems (COP 5725), Advanced DB Systems (COP 6727), & Data Mining (CAP 5771)
  - CS Project: Computer Vision (COT 6931), iPhone/iPad Programming & Embedded Systems