Brett G Rowberry

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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 largest personal loan lender to Splash's servicing, increasing revenue per loan ~17% and decreasing delinquency rate
- Improved in-house servicing capabilities, like flexible due dates
- Managed build-out of in-house servicing portal to replace third-party portal, reducing borrower login friction and improving telemetry of user actions like changing due date, adding payment methods, and making payments
- Conducted 60 interviews for backend engineering candidates
- Managed three different teams, including promoting, managing out, and coaching under-performers

Engineering Manager, Underwriting   **October 2023-March 2025**

- Guided final 1 ½ years of project to replace third-party LOS with in-house to improve development speed, security, and cost
- Supervised development of lending partner portal 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, Peach, 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**

- Increased personal loan automated income verification from 0% to 40% by transitioning credit model from net to gross income and using The Work Number as a data source
- Accelerated micro service development by maintaining template, including adding Swagger, post-deployment checklist, and team module to bundle values used for routing Slack notifications and VictorOps alerts
- Made microservice data available for analytics in Snowflake via Fivetran
- Split team to enable focus individual teams to focus on verifications or fraud and set up supporting infrastructure, including VictorOps on call rotation, Jira project, Confluence spaces, and onboarding guides
- Brought product management into GitHub
- 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 process guides for team onboarding, team lunch, and book buying policies
- Proposed uniform architecture for subscribing to third-party webhooks: API Gateway, SNS, SQS
- Wrote Clojure microservices to improve conversion and accelerate student loan underwriting in the areas of:
    - Education using National Student Clearinghouse data
    - Identity (from drivers license or passport images) using Ocrolus
    - Net income using Plaid Assets (attempted)
- Mentored team on functional approaches to unit testing: immutable values, data-first, generative 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 templating Terraform state file management when setting up ECR and CodeDeploy

QuickenLoans, Detroit, Michigan

Software Engineer   **April 2020-February 2021**

- 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, replacing Yeoman
- Implemented several features in microservices using F# on .NET Core 3.1, Kafka, Docker EE, SQL Server, and 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'

ExxonMobil Technical Computing Company, Spring, TX
Software Engineer   **February 2016-April 2020**
- 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 CODE Conferences, organized 1, hosted 2, became president, spoke at remainder with great reviews
- Implemented portal for creating Azure Storage Accounts and issuing/revoking SAS tokens using Giraffe and .NET SDKs for Azure (.NET Core 2.1-2.2)
- Created authorization API using Azure AD & 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)
- 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
- 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 trainings
- 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

Institute for Human and Machine Cognition, Pensacola, FL
Robotics Research Intern   **May-August 2014**
- Developed, tested, debugged, and improved in-house Java software for Boston Dynamics' Atlas & NASA's Valkyrie robots

University of West Florida, Pensacola, FL
Graduate Assistant   **October 2013-December 2015**
- 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