

MICHAEL REED

North Bethesda, MD

+



SENIOR SOFTWARE ENGINEER + DEVELOPER + SOLUTIONS ARCHITECT

Dedicated Senior Software Engineer highly regarded for developing complex, innovative full-stack applications. Known for creating custom software solutions that solve challenging problems using a combination of industry standards and cutting-edge technologies. Develops complex, robust, high-volume software solutions leveraging open source and cloud based frameworks as well as client-side technologies. Collaborates and leads teams to conduct peer code reviews, make and communicate technical decisions to clients, and impact the direction and end success of a solution.

SELECTED HIGHLIGHTS

- Exemplary academic qualifications include a Bachelor of Arts in Computer Science from Duke University.
- Created customized solutions for leaders across banking, law enforcement, military, human resources and more.
- More than twenty years of experience in Java Enterprise Edition (J2EE) Development, with deep knowledge in System Development Life Cycle (SDLC) and Software development methodology practices and practiced in analysis and preparation of Use Cases, Class Diagrams and Sequence Diagrams for design documents.
- Designed and developed IDW Trust Score service for analyzing third party scores from attribute providers, calculating assertion penalties, and returning a configurable, weighted proprietary score utilized in client policy decisions.
- Senior Developer for the MVA Fabric Agent, a service processes facial recognition Biometric Identification (BI) information taken from MVA commercial driver's license photos, in which the service sends encrypted communications to Fabric Agent services in other MVA locations and jurisdictions.
- Achieved VMWare Spring Professional Certification in 2020.
- Lead Instructor with Black Girls Code, most recently at DMV chapter's weeklong 2025 Summer Camp "AI Unlocked."

CORE COMPETENCIES

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| ▪ Software Analysis & Design | ▪ Troubleshooting | ▪ Production Support |
| ▪ Budgetary Oversight / P&L | ▪ Process Improvement | ▪ Testing/Debugging |
| ▪ Object Oriented Programming | ▪ Enterprise-wide systems | ▪ SDLC |
| ▪ Application Development | ▪ Technical Solutions | ▪ Training |

PROFESSIONAL EXPERIENCE

IRS (VibranTech and BDR Solutions Contract) + Remote + Jun 2023 – Present
Senior Software Engineer

Project: BBTS Modernization project migrates the functionality of the Batch Block Tracking System from antiquated Oracle Forms to a modern MVC architecture. The project also integrates several frameworks and libraries on both the front and back end including Spring and JSON Forms.

Environment: JavaScript, Typescript, React, Material UI, JSON Forms, Node.js, Java, Spring Boot, Kafka, ELM, MySQL, Maven, GIT, REST, Oracle Forms

- Researched and developed a JSON Forms prototype BBTS form as a proof-of-concept for the modernization effort.
- Recognized the need for, designed, and successfully developed the BBTS Legacy Code Parser Java application, saving approximately of 160 days of developer work by extracting data from massive Oracle Forms PL/SQL files programmatically, rather than by hand.
- Created custom renderers fully integrating MUI elements such as Drop Down List and DataGrid into the new modernized BBTS JSON Forms structure.
- Developed a secondary functionality for the BBTS Legacy Code Parser to convert extracted data into the object structure required for JSON Forms schemata and generate the requisite files.
- As informal JSON Forms SME, scheduled and hosted daily orientation meetings regarding the new framework, parser, and the goals and standard practices of the modernization project.

Affirm + Remote + Dec 2021 – Feb 2023
Senior Software Engineer

Project: Affirm Identity Product team is responsible for ensuring the validity of all customers looking to utilize the application. By verifying users submitted PII against several validation sources, including physical id and credit report checks, the Identity service ensures not only that Affirm is in compliance with financial regulations, but acts as the gatekeeper to all other Affirm products.

Environment: Python, Kotlin, Docker, Kubernetes, Snowflake, FastAPI, DynamoDB, Rollbar, MySQL, Chronosphere, Kibana XML, Maven, GIT, REST, HTTP.

- Implemented Externals Service Processor integration with Lexis Nexis Bridger for Affirm's Australia expansion in order to detect potential OFAC hits and identify Politically Exposed Persons.
- Prepared Identity platform for UK expansion by designing and developing ESP service connecting to TransUnion TruValidate, as well as prepared team datasets for UK-GDPR compliance.
- Migrated crucial observability metrics from Kibana and Grafana to Chronosphere, adapting respective queries into PromQL and tuning alerts to reduce noisiness.
- Responsible for Identity Project Vigilance Product Quality research and developed improvement plan for reducing latency, improving uptime, establishing SLAs and SLOs, and preventing regressions.
- Authored tech spec for and engineered alternative physical ID verification Onfido based on experiment treatment in order to improve Identity verification rates.

ID DataWeb + Vienna, VA + Jun 2017 – Sep 2021
Senior Software Engineer

Project: ID DataWeb's Attribute Exchange Network provides multi-tiered verification of customer identity, by compiling and analyzing personal information verification services and other third-parties. Relying parties can use the identity security platform by validating users through human identity, affiliation, device, and location characteristics.

Environment: AWS S3, Cloudwatch, SNS, EC2, and DynamoDB, Java 8, Spring, Spring Boot, Spring MVC, Linux, Jetty, JPA, Hibernate, JPQL, MySQL, XML, Maven, GIT, Logback, Bamboo, Mockito, Junit, Jenkins, JavaScript, AngularJS.

- Designed and developed IDW Trust Score service for analyzing third party scores, calculating assertion penalties, and returning a configurable, weighted proprietary score utilized in client policy decisions. Also provides 'breakdown' of contributing scores and modifiers applied.
- Created AP Manager application to modularize and refactor all Attribute Providers into a single, stand-alone Spring Boot app.
- Designed and developed Asynchronous Attribute Provider Gateway for processing of authenticated AP webhook results, as well as endpoint delivery through REST and SFTP protocols.
- Migrated hardcoded AP assertion logic to configurable, refreshable JSON based system (first in S3, then in MySQL).
- Integrated BioID biometric identification and facial liveness detection service into AXN platform sign-on and assertions.
- Engineer Cron-based scheduled jobs to run billing SQL scripts querying customer usage metrics and process results into .xls files and email.
- Wrote services to persist user's acquired scores, assertion claims, and policy decisions to historical tables for reporting.
- Developed several facial recognition/document verification service integrations, including Acuant, [REDACTED], Onfido, AuthenticID CatfishAIR, and Mitek Tiden.
- Coded Authorization Server functionality and configurable OIDC URLs for clients using Ping Identity and other IDPs for user attribute parsing.
- Implemented custom AP Exception system mapping individual provider's unique error codes to project-specific exceptions for streamlined alerts and debugging.
- Engineered refreshable, cached database configuration service to migrate application properties from static file.
- Developed Duns & Bradstreet Attribute Provider to analyze company email domains, validate, and return company DUNS numbers.
- Formulated AXN assertions from attribute provider services including Modern Woodmen, Boku, Neverbounce, Experian, Asurint, Equifax, Emailage, Telesign and Lexis Nexis.
- Wrote Liquibase MYSQL Schema changes from new AXN Attributes, Assertions, Services, and IDPs, and more.
- Refactored and created unit tests AXN modules using EclEmma for coverage statistics.

Surge – Morpho Trust + Remote + Jun 2016 – Apr 2017
Senior Java Developer (Contract)

Project: MVA Fabric Agent, a service processes facial recognition Biometric Identification (BI) information taken from MVA commercial driver's license photos, in which the service sends encrypted communications to Fabric Agent services in other MVA locations and jurisdictions and respond by returning information of any candidates that are a potential facial recognition matches.

Environment: Java 7, Spring, Spring Boot, Apache CXF, JAX-WS, JPA, Hibernate, JPQL, PostgreSQL, Stax, XML, Maven, GIT, SoapUI, JMeter, Log4J.

- Created Spring Boot, Apache CXF and JAX-WS-enabled SOAP-based Web Services to communicate with MVA BI-SOAP Interface.
- Utilized JPA/Hibernate and JPQL to create entity classes that manage transaction and jurisdiction-configuration relational objects with PostgreSQL persistence.
- Developed Mock SOAP Web Services through SoapUI to simulate MVA BI- messages to Fabric Agent client and adapter services.
- Implemented RabbitMQ message brokering queues for communication between Fabric Agent enabled jurisdictions.
- Managed JMeter Test Plans for BI-client and adapter services within Fabric Agent.

Freddie Mac + McClean, VA + Sep 2015 – Jun 2016

Full Stack Developer (Contract)

Project: Pricing Execution Application (“Fees” Component), a multifaceted financial program utilized to create and modify loan requirements and criteria. The “Fees” segment allows users to create Fee Components and set the attributes and criteria which determine the interest and other rates of loan taken out against their given asset.

Environment: EJB, Java 7, Javascript, AJAX, Eclipse, Maven, HTML, JSF, CSS, SQL, Rapid SQL Server, GIT, HP Application.

- Utilized EJB 3.0 to developed control layer for Pricing Component and related Change Requests' functionality.
- Used Primefaces, JSF, AJAX, and JS in the development of asynchronous application UI.
- Developed front-end, Excel-like Handsontables, using JS and HTML/CSS, to persist complex matrices of attribute values.
- Addressed Application Change Requests and Defects through HP Application Lifecycle Management, with version control using GIT and referencing Business-provided SRS.
- Deployed Datastage jobs to manage data collection and merge for Corporate Data Warehouse.

Deloitte/IRS + New Carrollton, MD + Feb 2015 – Jul 2015

Java Developer/SME (Contract)

Project: IRSMDC Program centers consists of batch jobs to process the daily bulk transmissions of new forms introduced by the Affordable Care Act and uses JSR-352 to read, process, and update transmission data to/from IRS databases.

Environment: JSR-352, Java 6, Spring, Hibernate, JUnit, Jazz RTC IDE, Oracle SQL Developer, XML, JIRA, SOAP-based Web Services, JAXB, Soap UI.

- Developed prototype JSR-352 batch job for the read, process, and write functions to an Oracle database.
- Implemented proof-of-concept Entity Service to encapsulate and sort complex IRS form query return data into POJOs.
- Created simulation IRS Oracle databases for IRS ACA forms, and developed Java-based data generators to recreate IRS Information Return data.
- Scripted, planned, and recorded instructional videos demonstrating version control actions in Jazz RTC.
- Created instructional decks for a client on basic use of SOAP UI functional tester.

Wells Fargo + Frederick, MD + Sep 2013 – Feb 2015

Full Stack Developer (Contract)

Project: Wells Fargo Lending Grid Portal, an internal web portal that supports business, administrative, and other applications used by Wells Fargo employees. Built on the Liferay platform and utilizes J2EE architecture with Spring MVC and Hibernate.

Environment: Java 6, JSF, JSP, SSH Secure Shell Client, Spring, Hibernate, JUnit, Eclipse IDE, Maven, Oracle SQL Developer, HTML5, CSS3, XML, Javascript, JIRA, Tortoise SVN, SOAP-based Web Services.

- Developed batch job ‘Bulk Service Processor’ to convert bulk XML loan files into SOAP messages and aggregate response into return file which, at peak, processed 10K loan requests a minute.
- Utilized Wells Fargo FSD’s to create Java batch jobs from the concept.
- Created standalone web applications for Portal that allow users to perform basic tasks, i.e. view transactional or financial data.
- Deployed Java beans to test environments using Linux SSH Secure Shell Client.
- Generated SQL queries, functions, and stored procedures to enhance and streamline portal searches.
- Supported WFIS (Wells Fargo India Solutions) in Job creation, operation, and Production Support.

Northrop Grumman + Herndon, VA + Aug 2012 – Jul 2013**Java Developer (Contract)**

Project: Master Data Management Application (MDM), a U.S. Military system used by the Pentagon and Armed Forces Branches that enables the creation of various US Army data nodes through the UI, as well as by uploading formatted Excel spreadsheet. Users can also search for, retrieve, and edit the various node through search criteria dynamically created for each node category.

Environment: Java 6, JSP, JSF, ADF Faces, EJB, RESTful Web Services, Oracle JDeveloper, Oracle SQL Developer.

- Devised code implementation from software design document (SDD).
- Developed and deployed EJBs in the view layer backing to respond to requests and improve functionality in the business layer.
- Used JSPs and JSFs to create interactive web pages designed using MVC (Model 2) architecture.
- Managed SQL servers housing MDM data nodes using Oracle SQL Developer.
- Created and edited U.S. Army data nodes using RESTful Web Services and Oracle Hyperion Data Relationship Management.

Eastern's Automotive Group + Reston, VA + Mar 2012 – May 2012**Java Developer (Contract)**

Project: Employee Management System (EMS), used by human resources departments of small to mid-sized companies and performs storage and retrieval on vital employee data (such as name, DOB, SSN, salary, and benefits).

Environment: Java 6, JSP, Struts, EJB, Spring, Hibernate, Eclipse, Weblogic Server 10.3, SQL Server 2005, SOAP based Webservice.

- Devised code implementation from software design document (SDD) and developed DAO layer using Hibernate methodologies to populate and query databases.
- Deployed EJBs in the view layer to respond to local requests and remote requests to the business layer.
- Used JSPs to create interactive webpages and applications using MVC (Model 2) architecture by implementing Struts.
- Exposed the employee information module as a service using SOAP based WebServices by generating a WSDL document.
- Deployed the application on Weblogic server using an ANT script which generated the WAR file for the web application.

Modell's Sporting Goods + Bethesda, MD + Nov 2011 – Feb 2012**Java Developer (Contract)**

Project: Big-Ticket Supply Manager application, designed for inventory on big-ticket items by accessing distributor and OEM supplier databases using a variety of J2EE methods, kept track of current stock and anticipated future needs for a single store. Additionally, it communicated with corporate servers functioning as a node on a vast networked supply system.

Environment: Java 5, JSP, Struts, EJB, Spring, Hibernate, Eclipse, Weblogic Server, SQL Server 2003, WSDL, CSS, and JavaScript

- Worked cross-functionally in construction and transition phases of RUP, coordinating with business analyst to clarify software requirements, focused on in the business tier to implement business logic with POJOs and EJBs.
- Tested code with Log4j and Junit and employed ANT to automate the creation of EAR modules.
- Used Hibernate to perm all database operations by creating hbm files and also defining the Hibernate.cfg.Xml file, integrating Hibernate with Spring and extensively used IoC and Dependency Injection along with AOP implementations.
- Consumed WSDL based WebServices exposed by different distributors to make current stock information about products available on the distributor's end.
- Designed the frontend by using CSS technology and also incorporated JavaScript to validate the fields in the JSP.

Alpine Access + Denver, CO + Sep 2009 - Aug 2011**Java Developer (Contract)**

Project: Support Tracker, a J2EE application, designed to provide Office Depot Inc. with data regarding technical support provided by Alpine Access to users logged into the website. The system allowed Alpine Access employees to quickly input technical phone/email support offers and product queries from Office Depot website users.

Environment: Java 5, JSP, Servlets, Struts, JUnit, Log4J, Spring, Web Services, Eclipse, Weblogic Server 8.1, MySQL.

- Collaborated on all phases of the SDLC, providing input to BA team on software design documents (SRS and SDD).
- Deployed a stateless session bean (EJB) in view layer to respond to local requests and remote requests to the business layer.
- Managed transactions through AOP using Hibernate Contextual Sessions with Spring, Struts 1.x to create an MVC architecture separating the view from the business layer and Subversion to check-in/check-out code from the test server.
- Developed the frontend using CSS and AJAX technologies to provide enhanced functionalities and design the webpages.
- Applied business logic in the Action Classes of the Struts Framework all executed through a single Command Pattern Servlet.

- Implemented Spring Framework's DI/IOC (Inversion of Control) feature using annotations and XML (applicationContext.xml).

AmeriCorps + Durham, NC + Aug 2008 - Aug 2009**Java Developer (Contract)**

Project: My AmeriCorps J2EE web application assists users in locating volunteering opportunities based on various search criteria, including job description, skills required, geographic location, gender restriction, equipment needs, etc.

Environment: Eclipse, Java 5, JSP, Spring, Struts, Tomcat, SQL Server 2003, JDBC.

- Involved in almost all phases of the SDLC, devising code implementation from software design document (SDD) including classic J2EE design patterns and constructed JSP pages with extensive use of JavaScript to reduce server loads and data latency.
- Deployed Spring enabled POJOs in the view layer to respond to local requests and remote requests to the business layer.
- Used Struts 1.1 to create an MVC architecture using Front-Controller Pattern thus separating the view from the business layer.
- Developed JDBC modules to connect to the database and perform CRUD operations.

EDUCATION**Duke University: 2008**

Bachelor of Arts in Computer Science, Double Major in African American Studies

Certifications & Additional Education:

- The Complete React Native and Redux Course
- Java 6 Fundamentals

TECHNICAL SKILLS

Programming Languages	Java, Python, Kotlin, C++, C#, C, XML, HTML, and Assembly Language
Databases	Oracle, Dynamo DB, MySQL, SQL Server 2008
Integrated Development	STS, Weblogic Workshop 10.3, Eclipse
Version Control Software	Subversion, Subclipse, GIT, Rational RTC
ORM Framework	Hibernate
IoC Framework	Spring Boot 2
Presentation Tier Technologies	HTML5, JSP/Servlets, Javascript, CSS3
Business Tier Technologies	EJB 3.0, POJO
Web Service Technologies	SOAP, JAX-WS and REST, JAX-RS
Computer Programs	Microsoft (Word, Excel, PowerPoint); Adobe (Flash, Dreamweaver, Photoshop); Logic Pro