FirstLark LLC - Founder

July 2023 – Present

Founded and built MotionMade, a SaaS platform that helps organizations apply Robert's Rules of Order. Led the full product lifecycle—from architecture to deployment—using modern functional programming and cloud-native tools. Tech stack includes Clojure, Fulcro, React/React Native, Datomic, AWS (Amplify/Cognito), containers (podman/docker) and LLM integration for enhanced UX.

Projects

MotionMade
- Built full-stack web application.
- Back-end
  - Clojure running on the JVM.
  - Endpoints include both traditional https and websockets.
  - Over-the-wire protocol is transit. Transit is a format and set of libraries for conveying values between applications written in different programming languages.
  - Ring used as the web server.
  - JSON Web Tokens used with Amazon Cognito as the OAuth 2.0 authorization server.
- Extensive database experience, including design, querying and debugging, primarily relational stores but also NoSQL
- Static marketing sites hosted in Cloudflare

DevOps
- Hosted on ec2 in AWS (Load balancing)
- Using Redis for blob storage

Garda Capital Partners - Senior Solutions Architect

February 2016 – June 2023

Helped launch Garda Capital Partners, reporting directly to the CTO. Operated in a high-trust, cross-functional role —building software, designing infrastructure, and supporting trading systems. Key contributions included:

- Built and maintained custom software (Java, React) used by the whole firm
- Extensive database experience, including design, querying and debugging, primarily relational stores but also NoSQL
- Deployed and supported custom and third-party applications (e.g. Tableau server environment and reports)
- Served as primary liaison between Garda and managed service provider (Options IT)
- Designed and led the implementation of the firm's Disaster Recovery plan, including biannual tests
- Evaluated and selected software vendors, provided architectural guidance and development expertise (e.g., Tempo project)
- Owned and maintained the batch processing system (ActiveBatch)
- Used and helped manage our TeamCity environment
- Provided team leadership and mentorship across multiple projects

Projects

Tempo
- Full-stack web application that displayed near real-time portfolio analytics.
- React / next.js for frontend and middle-tier
- Postgres for app-specific data, Enterprise Oracle for business data.
- C# microservices on the backend.
- Used IdentityServer for OAuth authentication, ultimately connected to Active Directory.

Tableau
- Deployed and managed our Tableau environment

- Developed core data sources. Most were pulling Oracle data but there were some file based as well (CSV, PDF, XLSX).
- Develop dozes of reports for various people in the firm, including executives.

<u>DevOps</u>
- Deployed and managed our stack of developer tools. JIRA, Confluence, BitBucket, TeamCity, Grafana, Opsgenie, Elastic (for logging).

Black River Asset Management - Director

May 2004 – January 2016

Held senior developer and consultant roles across multiple teams, delivering enterprise Java applications, developing and querying Oracle data models, and mentoring peers. Key contributions included Java and Scala based web applications, investor portal development, REST API integration, team leader and leadership of Java peer groups.

My team and I were responsible for developing, maintaining and enhancing the web applications used by Black River. There were two websites, one accessible from the Internet and one accessible only from the internal network. The Internet website was used for marketing to prospective investors and for getting fund performance data to current investors (via charts and reports). The internal website was used by Black River to report on critical business information and serve as an employee portal. The client tier was HTML/JavaScript/CSS, the middle tier used Java Portlets/Struts/JSPs, and the data tier used Hibernate/Spring. A subset of our data was exposed to other internal applications via REST web services. Most of the data was in Oracle but we also read from web services and LDAP directories. In addition to software development, I maintained and enhanced the underlying Oracle relational models and various data integrations. I also participated in the interviewing process for new hires and contractors as needed.

Projects

<u>Intranet</u>
- Full-stack web Java web application
- Used for both reporting, firm-wide communications and various data management utilities.
- Used portal library (JSR 168, 286) for managing the presentation layer.
- React / next.js for frontend and middle-tier

<u>T4 - Third Thursday Tech Talk</u>
- Full-stack web application that displayed near real-time portfolio analytics.
- React / next.js for frontend and middle-tier

<u>Applications</u>
- HR App
- FormPF
- NightBatch - VaR process, PL Process, Hierarchy maintenance and history
- ActiveBatch
- Contributed to various Risk spreadsheets (VBA)

<u>Oracle</u>
- CAPS, BRDW, RISK
-
- Developed custom user defined functions for fast processing of geometrically linked returns.

Cargill - Senior IT Analyst

June 1998 – April 2004

From 2001-2005 I worked as a senior developer in the Corporate IT department doing custom software development for various Cargill business units. The projects were mostly small to medium sized Java web applications. From 1998-2001 I worked on the Corn Milling

technology team where my primary responsibility was developing Visual Basic client/server applications. The applications tracked quality metrics on products within the North American Corn Milling plants and terminals.

Projects

<u>Peer Leadership</u>
- During my time with Corporate IT I took an extended assignment in the IT research group. My role in that group was to lead the Java Peer group within Cargill and serve as a center of expertise for Java knowledge within the company. This role also gave me the opportunity to be involved in the creation of Target Architectures, including Identity Management and Web Application Management.

<u>T4 - Third Thursday Tech Talk</u>
- At Black River I planned and hosted a monthly event where the developers would get together and talk technology. I'd have lunch brought in and we would typically watch a video. Examples of past videos have included presentations from the Strata Conference, Google Tech Talks and a presentation on the R programming language.

Cluster Software Specialist - North Dakota State University
April 1995 - May 1998

This position was responsible for ensuring that all Windows machines in the various computer labs had the correct software on them and were running smoothly. I developed a system where we could maintain the software on the various machines while still maintaining the flexibility that the different lab environments called for. I also performed various other roles while at NDSU, including working at the helpdesk, performing software/hardware installs for faculty and being a student advisor to technology decision making on the campus.

Computer Operator - Northwest MN Multi-Region Computer Center
Jul 1994 - Mar 1997

This position was responsible for the day-to-day operation of a Unisys A12 mainframe. Activities included job queue scheduling (batch transactions), tape backup, check printing and report processing.