

# David Orme

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## SUMMARY

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Senior Engineer with a strong background in software development and technical leadership. Proven expertise in modernizing user interfaces, enhancing programming languages, and streamlining data processes. Extensive experience working remotely in fully-distributed teams. An innovator who fosters internal and open-source collaboration. Skilled in functional programming with a solid foundation in Scala and Clojure, dedicated to achieving technical excellence and driving business success.

## PROFESSIONAL EXPERIENCE

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### CANARY LABS

Martinsburg, PA

#### Senior Engineer

January-March, 2023

Transformed the outdated administration interface from visual tables to a modern visual graph layout using SVG, ECMAScript, web components (using Lit), the web version of the Eclipse Layout Kernel, and Inkscape.

### SPARKCOGNITION

Houston, TX

#### Senior Engineer

May-September, 2022

Enhanced the Scala-based compiler web service for a visual, low-code programming language, implementing small yet impactful changes.

### DIVIDEND FINANCE

San Francisco, CA

#### Senior Engineer

2021-2022

Identified optimal code locations for required changes in a mature Clojure/Clojurescript project, ensuring seamless implementation; resolved trivial issues with precision, minimizing disruption and streamlining development process.

### RALLY HEALTH (UNITED HEALTHCARE)

Chicago, IL

#### Senior Engineer

2017-2021

Enhanced United Healthcare's medical provider and carepath search engine (<https://www.uhc.com/find-a-doctor>).

- Enabled consumers to more quickly and accurately find the best care possible for the lowest cost.
- Utilized Scala, Play Framework, and an in-house Elasticsearch wrapper.
- Identified and addressed security risks within a complex service-driven application.

Initiated and led internal open-source efforts.

- Created a compiler to translate web service specifications in OpenAPI format to Scala client and server stubs.
- Led the adoption of this tool across multiple back-end services, accepted suggestions, and incorporated enhancements from the community.
- Facilitated and added several large contributions from the internal community, including support for cross-version compatibility testing and test framework generation.

Created and delivered Rally's new-hire Scala training program.

- Reduced the time for Java developers to become productive in Scala from approximately two months to two weeks.
- Taught experienced Java developers how to think in a functional programming style using Scala using small worked code examples.
- Transformed the program into a successful internal open-source project with multiple contributors.
- Liaised with senior management to publicly open-source the course on Github at [rallyhealth/scala-bootcamp](https://github.com/rallyhealth/scala-bootcamp).

**BRAD'S DEALS**  
**Technical Lead**

**Chicago, IL**  
**2015-2017**

Directed the transformation of the Amazon Redshift ETL process from Pentaho to Clojure.

- Entirely eliminated regular ETL process crashes. When bugs occurred, they were easier to find and fix due to Clojure's superior process traceability. As a result, data consistency and engineer morale improved.

Implemented agile estimation and retrospectives for back-end engineering teams.

- Created a safe environment for colleagues to have strong opinions and to dialog toward win-win solutions.
- Improved collaboration on day-to-day tasks and reduced friction among several key teammates.

**HERE (NAVTEQ)**  
**Senior Engineer**

**Chicago, IL**  
**2013-2015**

Contributed to real-time crowd-sourced map updating algorithms used by of Here's self-driving car prototype in collaboration with BMW.

- Demonstrated expertise in utilizing Amazon Web Services, Twitter Storm, and Apache Tomcat to develop a cutting-edge streaming big-data system. This system processed real-time road data crowd-sourced from vehicles on the road to update the cars' maps, enabling them to navigate safely.
- Played a key role in designing the algorithm that updates the maps when cars detect that the available lanes on a road have changed due to road construction.

Engineered several critical testing support tools using Scala.

- Some examples include: a remote SSH-based server scripting platform, a Play Framework-based sinkhole server for testing HTTP servers, and an implementation of Unix pipe semantics over Java's Iterable[T].
- These tools made remote testing and process pipelining easier; they underscore my commitment to designing quality into software engineering processes, not just into the software itself.

**J. P. MORGAN**

**Consultant, then Associate (employee)**

**New York, London, Glasgow**  
**2007-2013**

**Technical lead, then leader** for Business Modeling Workbench, an experimental low-code language for describing server-side data flows. Utilized Java, Eclipse EMF, and Scala.

- Identified and implemented a method to apply monads from Category Theory in a Java-based programming language implementation.
- Compared with the imperative solution, the Monad-based solution reduced the code base from thousands of lines of code to hundreds and made the implementation easier to reason about.

**Technical lead, then leader** for the OneBench project, an effort to productize Eclipse RCP for internal financial application development. This enabled the investment bank to deliver server-pushed application updates for the bank's real-time trading systems, resulting in solutions that deliver the best of web-based applications combined with the full performance of a trader's high-end desktop workstation.

Created XScalaWT, a forward-looking Scala-based domain-specific language for describing desktop graphical user interfaces using a functional style in Scala.

**THE PAMPERED CHEF**  
**Consultant**

**Addison, IL**  
**2005-2007**

Architected and built the next-generation mission-critical desktop and web services-based order-entry application deployed to 40,000 clients worldwide. This XP-based agile team delivered an application that saw only two production bugs discovered during its first year in service. Utilized Java and Eclipse's Rich Client Platform.

Co-designed Eclipse.org's data binding framework, which we used at The Pampered Chef to increase developer productivity coding user interfaces by approximately 40% compared with hand-coded bindings. Eclipse Data Binding was used as

inspiration for Java's Beans Binding, and its terminology and semantics (e.g.: Observable) influenced future reactive frameworks like RxJS.

**SARVEGA (DURING ACQUISITION BY INTEL)**

**Oak Brook, IL**

**Consultant**

**2005**

Analyzed requirements and designed a next-generation graphical interface to be built on Eclipse Rich Client Platform (RCP), plus EMF and GEF. Delivered a high-fidelity prototype of the new system.

**DB4OBJECTS**

**San Mateo, CA (remote)**

**Consultant**

**2004-2005**

Created the db4objects Object Manager, a rich graphical database browser and ad-hoc query-by-example user interface for the db4objects object database.

**ADVANCED SYSTEMS CONCEPTS**

**Shaumburg, IL**

**Chief Architect**

**2001-2004**

Conceived and launched several commercial and open-source projects based on the Eclipse IDE and Eclipse Rich Client Platform.

- SWTWorkbench was a dual-licensed (GPL and commercial) product providing important user interface components like grids and masked edit fields required to efficiently use Eclipse's SWT user interface toolkit in business applications.
- The Eclipse.org Visual Editor Project (VE) in collaboration with IBM was the first non-IBM open-source project at Eclipse.org. VE was a collection of Eclipse plug-ins that added graphical user interface editing capabilities for Swing and SWT to the Eclipse IDE.

Modernized ABSTRACT, a programmer productivity tool product for IBM i5 and iSeries computers.

- Created an Eclipse version of ABSTRACT using Java, C++, and Active-X controls.
- Added Visio graph drawing support to ABSTRACT, enabling customers to easily embed documentation generated by ABSTRACT inside other Office documents.
- Created an RPG program flowcharting tool for ABSTRACT using C++.

**PURDUE UNIVERSITY**

**West Lafayette, IN**

**Visiting Assistant Professor**

**1999-2001**

Created and taught classes in the Department of Computer Technology. Administered server infrastructure for those classes.

- CPT 388-Internet Programming taught students how to use Perl's version of Active Server Pages to deliver interactive web pages.
- CPT 385 taught "Rapid Application Development," a technique for managing software development by driving design off of user interface prototypes. (This was the predecessor to what we know as Agile today.)
- Managed a multiuser Red Hat Linux server that students used for Perl and Java projects.

**COCONUT PALM SOFTWARE**

**New York, NY**

**President; Senior Consultant**

**1995-1999**

Created Coconut Palm Software, a New York consultancy specializing in Delphi, Java, and PHP applications.

- Programmed interactive web pages for John Lucht's *Rites of Passage-RiteSite* Web site using PHP and Postgres.
- Created a Java Servlet solution for displaying, distributing, and printing reports for both Shain Colavito Pensabene Direct and Rapp-Collins (two prominent New York advertising agencies).
- Analyzed, designed, and implemented the print media tracking / buying system at Rapp-Collins. Used UML for analysis and Delphi Client/Server and Advantage SQL database server for implementation.
- Updated the broadcast media tracking, planning, and buying systems and Shain Colavito Pensabene from Clipper to Delphi and Java / Servlets.
- Helped rewrite the New York City Department of Health disease registry from a mainframe system that only handled tuberculosis cases. Utilized Delphi and Interbase.

## EDUCATION

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COLUMBIA UNIVERSITY

*Master of Science in Computer Science*

New York, NY

1995-1999

TAYLOR UNIVERSITY

*Bachelor of Arts in Computer Science, Artificial Intelligence track*

Upland, IN

2007-2011

## ADDITIONAL INFORMATION

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- Technical Skills: Clojure, Clojurescript, Scala, Java, SQL, HTML/CSS, ECMAScript, AWS.
- Presented at EclipseCon each year from 2005-2011.
- Awards: 2007 Eclipse Community Award for best RCP application deployment.