

David Orme

150 S. Gary Ave • Carol Stream, IL 60188 • (630) 344-3979
djo@coconut-palm-software.com • github.com/coconutpalm

SUMMARY

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

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Transformed the outdated administration interface from visual tables to a modern visual graph layout using SVG, ECMAScript, web components (using Lit), the web version of the Eclipse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**Chicago, IL****Technical Lead****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)**Chicago, IL****Senior Engineer****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**New York, London, Glasgow****Consultant, then Associate (employee)****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**Addison, IL****Consultant****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

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

- 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.