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| Scottsdale, AZ [Linkedin](https://www.linkedin.com/in/charles-walter-44b860/) | Charles Walter | (480) 809-4913  [Code Samples](http://chwalter.marathoncoder.com:8081/code.html) |

Experienced Unix Java developer with expertise in OBDMS and scientific programming including:

* Highly analytical and detail-oriented approach to problem solving and software development.
* Demonstrated expertise in core Java API.
* Over twenty years OOP and Linux experience.
* Track record of developing clear, clean, modular code.

## Work Experience

**Principle Software Engineer Arctic Slope Regional Corporation**  **2015 - Present**

NASA Ames Research Center Moffett Field, CA

* Helped build a self-contained portable unit currently in use by the US Forest Service and CAL FIRE to warn wildland firefighting drone operators of encroaching aircraft.
* Developed functionality to support research efforts into better managing the high air traffic flow into the New York/DC corridor.
* Worked to improve the automation of aircraft ground flow at the congested Charlotte airport.
* Created a browser dashboard to integrate results from several preflight and real-time aero data services to better manage safety issues associated with unmanned aircraft.
* In process of developing a tool to enable wildland firefighting drone operators to operate at night time.
* Aided research efforts into the impact of air taxis operating in the Dallas/Fort Worth metroplex based on load and routes.

**Vice President of Development Valida** **2014 - Present**

San Francisco, CA

* Developed the full software stack, from website and Android app to server to database using PHP, HTML, CSS, Java, C#, and SQL.
* Automated build and test processes.

**Senior Software Engineer UC Santa Cruz** **2010 - 2015**

NASA Ames Research Center Moffett Field, CA

* Enabled research efforts of the Unmanned Aircraft Systems in the National Airspace System (UAS in the NAS) project to support modeling aircraft flying with visual flight rules with or without contact with controllers in airspace that allows them to mix with passenger airlines flying with instruments.
* Helped replicate the new FAA En Route Automation Modernization display format that has recently become the standard in all centers in our primary simulation software.
* Aided the Trajectory-Based Automation System, Efficient Descent Advisor, and the UAS in the NAS projects in shakedown testing prior to and during experiments to allow them to run smoothly.
* Assisted the Spot and Runway Departure Advisor and Dynamic Weather Routes projects, as well as the Verification and Validation and Air Traffic Controller Center Adaptation teams with customizations to applications and scripts.

**Lead Java Developer Objectivity**  **2000-2010**

Sunnyvale, CA

* Developed a method to support weak and soft references that allowed users to customize non-memory intensive data structures to fit their specific needs.
* Certified Objectivity/DB with IBM as a Ready for Grid ISV.
* Developed specialized solutions that allowed entity bean users to seamlessly bypass JDBC-only solutions and use container-managed persistences with WebSphere and WebLogic.
* Analyzed scalability of object ingest to determine root causes of performance degradation which aided company systems engineers in better prototyping customer needs and more accurately predicting performance.
* Created a design to to allow customers more concurrent thread context access while managing referential integrity themselves by creating a switch to release protective locking.
* Generated a resource adapter that permitted customers to plug in our product as an EIS and have transparent transaction and persistence management using JCA in their enterprise applications.
* Implemented a series of C++ applications and Perl scripts to allow management to maintain stable and test code branches and automatically and securely migrate changes that have been established as safe.
* Presented an overview talk on Objectivity for Java at the Objectivity WorldView conference in 2005. This was targeted at government integrators, including potential customers.
* Developed tests for new API as well as to validate bug fixes. Ran the certification test suite on all platforms prior to release.
* Wrote a parser to provide full support of entity bean queries.

## Languages and Technologies

* Languages: Java, C++, C, JavaScript, TypeScript, HTML, CSS, XML, PHP, C#, SQL
* Technologies: Docker, Postgres, Git, Gradle, MonoDevelop, Android SDK, Eclipse, Postman

## Education and Certifications

* **Ph.D. Astronomy,** Las Cruces, NM. **1995-1997**
* **M.Sc. Astronomy,** Las Cruces, NM.  **1992-1995**
* **B.Sc. Astronomy and Physics,** Tucson, AZ. **1987–1992**

## Awards and Publications

* [NASA Profile](https://www.nasa.gov/people/charles-m-walter/)