

## CHAD BERKLEY

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### PROFESSIONAL EXPERIENCE

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#### **Software Engineer**, FlightStats, Inc. (March 2011 – Present)

- Lead iOS engineer.
- Developed, designed and implemented the iPad app *AirportZoom*.
- Currently developing FlightStats *Traveler* for iOS (iPad and iPhone).
- Maintenance and bug fixes for Flightstats *Traveler* for Android.

#### **iOS Developer**, Self employed (November 2009 – Present)

- *Spider GPS* – A GPS tracking app targeted at cyclists, runners, hikers, climbers and skiers.
- *SafeRoom (Currently in development)* – A personal locator beacon for emergency situations.
- *DiabeticDosage* – An insulin dosage calculator for diabetics.
- *Simply Done* – A simple to do list app.
- *MSStep1* – Flash card app for medical students taking the USMLE Step 1 standardized test.
- *Home on the Tube* – A real estate listing app.

#### **Software Engineer**, University of California, Santa Barbara (June 2000 – March 2011)

- Sr. software engineer, DataONE project.
- Led the design and implementation of the *Kepler* scientific workflow execution tool.
- Designed and implemented the *Metacat* XML based metadata storage and retrieval system.
- Designed and implemented the *Morpho* desktop metadata creation tool.
- Designed and implemented the Ecological Metadata Language (EML) XML specification.
- Analyzed and redesigned the *Vegbank* vegetation database system for performance and UI improvements.
- Designed and implemented JUnit test suites for various applications.
- Maintained Bugzilla bug database and CVS/SVN version control system.
- Worked on many distributed, heterogeneous database projects.
- Administered Apache/Tomcat web servers.

#### **Java Programmer**, Montana Cooperative Wildlife Research Lab, Missoula, MT (October 1999 – May 2000)

- Translated statistical routines from C/C++ to Java for web deployment.
- Involved in processing satellite imagery and land type classifications with statistical methods.

#### **Research and Development Intern**, Recording for the Blind and Dyslexic, Missoula, MT (June 1999 – May 2000)

- Created use-case scenarios for audio recording applications and digital playback devices.
- Created comprehensive test suites for audio recording applications.
- Interviewed users and made recommendations for additional functionality and bug fixes.
- Involved in the research and implementation of the DAISY 2.01 specification for digital talking books.

### EDUCATION

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#### **Bachelor of Science, Computer Science** (May 2000)

The University of Montana, Missoula

Achievements – 3.85 core computer science GPA, 3.46 overall GPA, completion of senior thesis project. Presidential scholar award for top computer science graduate in 2000. Undergraduate teaching assistant. Minors in Mathematics and German.

## TECHNICAL SKILLS

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- Cocoa Touch / Objective C / iOS: 4 years
- Java: 15+ years
- C/C++: 15+ years
- RESTful web services: 7 years
- Javascript: 6 years
- PHP: 7 years
- PostgreSQL: 11 years
- MySQL: 11 years
- System administration (Linux/Windows/OSX (MacOS)): 15+ years

## ADDITIONAL EXPERIENCE AND TRAINING

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- Owner, Stumpware, LLC. iOS app distribution company.
- Presenter, Ptolemy mini-conference 2007, Berkeley, California.
- Presenter, 5th International Conference on Ecological Informatics 2006, Santa Barbara, California.
- Instructor, SEEK metadata tools faculty workshop 2006, 2007, Albuquerque, NM.
- Presenter, Globus Grid Forum 2004, Berlin, Germany.
- Presenter, Statistical and Scientific Data Management Conference 2002, Edinburgh, Scotland.
- Presenter, Statistical and Scientific Data Management Conference 2001, George Mason University, Virginia.

## PUBLICATIONS

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Chad Berkley, Shawn Bowers, Matthew Jones, Joshua Madin, Mark Schildhauer (in review): Improving Data Discovery in Metadata Repositories through Semantic Search. Proceedings of iSEEK'2009. IEEE Computer Society.

Jianwu Wang, Ilkay Altintas, Chad Berkley, Lucas Gilbert, Matthew Jones: A High-Level Distributed Execution Framework for Scientific Workflows. Proceedings of Scientific Workflows and Business Workflow Standards in eScience (SWBES) 2008.

Bertram Ludäscher, Ilkay Altintas, Chad Berkley, Dan Higgins, Efrat Jaeger, Matthew Jones, Edward A. Lee, Jing Tao, Yang Zhao: Scientific workflow management and the Kepler system. Concurrency and Computation: Practice and Experience 18(10): 1039-1065 (2006)

Chad Berkley, Shawn Bowers, Matthew Jones, Bertram Ludäscher, Mark Schildhauer, Jing Tao: Incorporating Semantics in Scientific Workflow Authoring. Proceedings of SSDBM 2005: 75-78

Ilkay Altintas, Chad Berkley, Efrat Jaeger, Matthew Jones, Bertram Ludäscher, Steve Mock: Kepler: An Extensible System for Design and Execution of Scientific Workflows. Proceedings of SSDBM 2004: 423-424

Daniel Higgins, Chad Berkley, Matthew Jones: Managing Heterogeneous Ecological Data Using Morpho. Proceedings of SSDBM 2002: 69-76

Chad Berkley, Matthew Jones, Jivka Bojilova, Daniel Higgins: Metacat: a Schema-Independent XML Database System. Proceedings of SSDBM 2001: 171-179

Matthew Jones, Chad Berkley, Jivka Bojilova, Mark Schildhauer: Managing Scientific Metadata. IEEE Internet Computing 5(5): 59-68 (2001)