# JAMES W COOPER, PHD SOFTWARE ARCHITECT

# **Expertise in**

Creating custom solutions to unique software problems.

- Software design and architecture
- Medical Analytics
- Text Analytics
- Java Design Patterns
- Technical writing
- Employee training

James W Cooper advises chief information officers (CIOs) and small businesses on software web architecture and design. He holds 8 software patents and is the author of 15 books on technical software issues. In addition, he is well known as a lecturer and author on software Design Patterns and was a columnist for *JavaPro* magazine for 5 years. He spent 20 years doing research at the IBM T J Watson Research Center in Yorktown Heights, NY.

In a recent project in Medical Analytics he was a member of a cross-institutional team with faculty from Columbia University and Columbia-Presbyterian Hospital to develop a prototype client server system for the analysis of the temporal evolution of symptoms in brain tumor patients. The resulting system was used as a central part of an NIH grant application.

In another recent project, he created the powerful new Tara system for displaying 3D MRI images in any web browser, and using a server connected to the IBM Cell high speed processor to register pairs of images in real time.

Dr. Cooper has an A.B. degree from Oberlin College and M.S. and Ph.D. degrees in chemistry from Ohio State University. He has been on the Editorial Board of the Journal of Magnetic Resonance, and a Contributing Editor to JavaPro magazine. He gave lectures on Design Patterns at the JavaOne and OOPSLA conferences and spoke frequently to student groups as part of IBM's Java Train lecture series. He also developed the Computers in Chemistry program at Tufts University, and managed a multinational software development effort at Bruker Instruments (Billerica, MA).

Dr. Cooper combines his corporate and academic background with entrepreneurial experience, founding Lab Software Associates, a software development and web consulting firm, in 1985.

#### **Contact Information**

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#### **Text and Medical Analytics**

- Broad-based experience In using open source Java text mining and search tools.
- Custom development of medical text analytic tools: drug-dosage annotators, Radlex annotators.
- Creation of custom text analysis solutions using
  - o Lucene, Derby, Apache UIMA, Apache Tomcat and Apache httpd server.

#### **Solutions to Unique Software Problems**

- Specialize in finding unique web-based visual solutions for representing data in your business or technical systems.
- Work with you begins by determining a well-defined vision, goals and requirements.
  - o Active stakeholder participation is required to assure a successful project.
  - o Joint development, testing and continual feedback to assure success.

### **Software Design and Architecture**

- Excel in building custom web applications.
- Specialize in Java frameworks built and deployed upon open source technologies.

#### **Employee Training**

- Object-oriented analysis and design mentoring.
- Customized courses to train your employees on the latest technologies and on any we develop for you.

## **Technical Writing**

- Highly experienced, widely published technical writer.
- Can produce high-quality internal and customer-faced training and technical documents to give your company a highly professional image.

#### **Technical Tools**

Java, AJAX, Dojo, JSON, JSPs, Derby, Access, MySQL, DB2, PHP, Eclipse, Apache, Tomcat, LAMP.