

# DOUGLAS LOVELL

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[stackoverflow.com/cv/dlovell](https://stackoverflow.com/cv/dlovell)

Software Engineer and Computer Scientist. Broad experience in languages and application domains from transactional web applications to UI tools, W3C standards implementations, and scientific programming. Deep experience with C, Java, Ruby on Rails, HTML, CSS, XML markup. Most productive in development and development leadership roles. Recipient of IBM First Plateau Invention Achievement Award. Author of XSL Formatting Objects Developers' Handbook, published by Sams.

**TECHNOLOGIES:** Agile development, Software and data architecture, Innovation, C, Java, Ruby, Ruby on Rails, C++, Objective-C, SQL, JavaScript, jQuery, HTML, CSS, XML, XSLT, macOS, Windows, Linux, iOS, Android

## CAREER ACCOMPLISHMENTS

- Ruby on Rails and JavaScript web applications:
  - Scrum team member developing SaaS application for Open Source audit, governance and discovery: <http://www.roguewave.com/capabilities/open-source-auditing>. RoR, 163KLOC, 164 models, >60K users. 200TB HBase cluster with ~1B rows, Solr cluster with 100M indexed documents.
  - Authored myFitTime.com, a flight time logging application for aircraft pilots. (Ruby on Rails, JavaScript) Web: <https://myFitTime.com/>
  - Authored the International Aerobatic Club database of aerobatic competition results and pilot scores– enables pilots, judges, team managers, and organizers to know how they are doing, who is doing well, and to make decisions about how best to improve. (Ruby on Rails, JavaScript) Open sourced at <https://github.com/wbreeze/iaccdb>; deployed at <https://iaccdb.iac.org/>
- Software innovator developed and deployed applications for XML:
  - Implemented XSL Formatting Objects (XSL-FO) W3C Recommendation used by IBM Print Services.
  - Integrated XML cursor research technology into IBM WebSphere Process Server.
  - Creator of TeXML, the first typesetting technology for XML.
- Adapted software technologies for new uses, including:
  - Ported Adaptive Mesh Refinement PDE simulation written in Titanium parallel processing language
  - Invented and implemented novel layout managers for Java AWT.
- Developed new tools for Eclipse programming environment, including:
  - Design and conceptualization tool for enterprise data formats (XML Schema).
- Added functionality to XSLT, including:
  - Trace facility for software debugging.
  - Authoring tool for stylesheet transformation.
- Growing sport of Competition Aerobatic flying by:
  - Designing and implementing web-based contest registration and reservation system for International Aerobatic Club (IAC).
  - Research, development, and publication of ranking and scoring methods for aerobatic competitions.

## PROFESSIONAL EXPERIENCE

Senior Software Engineer, ROGUE WAVE SOFTWARE, Louisville, CO

Developer for the OpenLogic product, a SaaS offering for Open Source software governance and discovery developed using Ruby on Rails, Ruby, and Java.

Pilot, CORPORATE FLIGHT MANAGEMENT, Danbury, CT

Bring owners and charter customers safely to their destinations in Phenom, King Air, and Citation airplanes.

Software Engineer, IBM, T.J. WATSON RESEARCH CENTER, Hawthorne, NY

Implemented standards and research technologies. Grew mind share for emerging technologies through publication.

- Enhanced IBM's strength in intellectual property by patenting innovative technologies.
- Impacted IBM product development with new technology that enhanced existing products and enabled new products.

## **PAPERS AND PUBLICATIONS**

- “Bite: Workflow Composition for the Web.” International Conference on Service Oriented Computing (ICSOC)
- “Document Models and XML Vocabulary Building for Business Users.” XML Conference and Exposition, Washington, DC
- “Rendering Faithfully with XSL Formatting Objects.” 12th International World Wide Web Conference
- “Introduction to MathML.” 1st International Conference for MathML and Math on the Web
- “TeXML: Typesetting XML with TeX. TeX Users’ Group Annual Meeting
- “Custom Legal Documents for the Auto Loan Exchange.” TeX Users’ Group Annual Meeting

## **PATENTS**

- “Limiting execution of software programs.”
- “Method and system for stylesheet execution interactive feedback.”
- “Method and system for stylesheet-centric editing.”
- “Method for arranging display elements.”
- “System for electronically developing and processing a document.”
- “Method for enabling adaptive sizing of display elements.”
- “Method and apparatus for producing animated drawings and in-between drawings.”

## **AVIATION**

Airline Transport Pilot, Single and Multi-Engine Land, Type rated Embraer Phenom 100 and Cessna Citation V. IAC Advanced Aerobatic Competitor. Certified Flight Instructor, Instrument Airplane

## **EDUCATION**

MS, Computer Science, SUNY, New Paltz, New Paltz, NY

BFA, Photography, School of Visual Arts, New York, NY

AAS, Aviation Technology, Ohio University, Athens, OH

Machine Learning, Andrew Ng, Stanford University, Coursera online

Software Engineering Management, Carnegie Mellon University, Pittsburgh, PA

Project Management Fundamentals, IBM, Project Management Institute (PMI) Three-Day Course