



Robert I Petersen

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Today's computing needs cross **networks**, software **libraries**, **languages**, and **applications**. They require a **full stack developer**. **Big data** is being generated at an **ever increasing rate**. Analysis tools must be **robust**, **easily modified** and **scalable**. I have written code from **web application** to **supercomputers**. I know **Java**, **C/C++**, **Python**, **HTML**, **JavaScript** and many other more esoteric languages. I have **analyzed**, **visualized**, and **aggregated terabytes** of data. I have parallelized using **MPI**, **OpenMP**, and **Hadoop**.



EDUCATION

- 2016 — **PhD Geophysics**
Scripps Institution of Oceanography, UCSD
- 2010 — **MS Earth Science**
Scripps Institution of Oceanography, UCSD
- 2009 — **BS Physics**
University of California, San Diego



SKILLS

Languages - Python, C/C++, Java, Shell Scripting, HTML, JavaScript
Big Data - MPI, OpenMP, Hadoop, MapReduce
Database - Oracle, MySQL, PostgreSQL, MS SQL server
Internet - WSGI, Java Servlets, JSP, PHP, Web Services, REST, SOAP
App Servers - JBoss, WebLogic, WebSphere, ATG Dynamo, Tomcat
Operating Systems - GNU/Linux, OS/X, Windows



WORK EXPERIENCE

- 9/2009 - Current — **Geophysics Graduate Student** : UC San Diego, San Diego, CA USA
Developed planet scale computer models using massively parallel finite volume code.
Wrote data visualization and parallel data analysis code, (several TB of data).
Presented at scientific conferences and published in peer reviewed journals.
scientific computing, visualization, big data, data analytics, python, c/c++, java, hadoop, mapreduce, web, html, javascript, hdf5
- 1/2003 - 10/2008 — **Senior Software Architect** : Sonic Solutions, Santa Clara, CA, USA
Redesigned e-commerce website back-end, refactoring code base.
Deployed bug tracking, build and release system.
Designed and developed 3rd party integration with suppliers, fulfillment partners.
full stack development, html, soap, xml, java, c/c++, shell scripting, application server, IBM websphere, ATG Dynamo, Jboss, Apache Tomcat, database, oracle, mysql, postgresql
- 8/2001 - 1/2003 — **Senior Technical Architect** : Knowmadic Inc., Santa Clara, CA, USA
Design and development of J2EE based integration server and client software.
Designed data flow code between native webpages, application servers, and data stores.
Incorporated new product requirements and features from a VB/C++ legacy product.
Technical lead to the development staff.
full stack development, html, soap, xml, java, servlet, JSP, c/c++, shell scripting, application server, IBM websphere, BEA, Jboss, Apache Tomcat, database, oracle, mysql, postgresql
- 1/2001 - 6/2001 — **Technical Architect (Contract)** : lastminute.com, London, UK
Defined strategy to expand product offering into additional markets and third-party product offerings.
Technical evaluations of connectivity technology and strategies.
Designed the i18n internationalization layer within the web application.
Supported interim CTO with technical and staffing decisions
UML, java, ATG, application servers, soap, xml, oracle
- 8/1999 - 11/2000 — **Chief Technical Architect** - eve.com, San Francisco, CA
Lead 15 person team of developers.
In charge of technical architecture for storefront, in-house, and back-end systems.
Headed redeployment of site from ATG Dynamo to BEA Weblogic
Defined coding standards, source control and release methods.
ATG, weblogic, application server, web server, database, oracle, mysql, java, soap, xml
- 2/1998 - 7/1999 — **Senior Software Engineer** - Financial Engines, Palo Alto, CA
Developed in-browser java applet application framework.
Created a secure back-end data exchange environment for financial and customer information.
java, c/c++, full stack, public key encryption, digital signatures, XML, HTTP, HTML



WORK SAMPLES

GitHub:

<https://github.com/ripetersen> | <https://github.com/geodynamics-liberation-front>
<https://github.com/orangefood> | <https://github.com/MISTExpedition>

Online Samples:

<http://therealgjf.org/robert.i.petersen/projects>



REFERENCES

Available upon request