

Tim Kou

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Tim is a generalist. He is fond of the concept and practice of lean startup and tried to achieve something. He built servers, networked devices, installed control panel, modified DNS records, set up mail server, deployed websites for public access, attracted traffic, and kept operation and marketing for business.

Tim is a specialist. He has been utilizing Matlab for data analysis for 8 years, and building algorithm for High frequency Trading. He has years of experience in front end, back-end, architecture, system administration, network administration, Modeling and ETL, and database analyst..

Tim is a researcher. He has 1 patent, and 5 publications in different fields. Meanwhile, he has a master degree in satellite image processing, whose technology is similar to Google Map and Earth. He has published papers on localization based on wireless network, whose algorithm took IBM optimization tools (Cplex) days to run out.

Tim is a hands-on programmer; he started programming on DOS in 2002 and soon on Assembly, C, C++, Java and the advanced languages Ruby on Rails, Node.js, Python on Django. Looking back, he oversaw coding shifts from client to server, desktop to web and mobile devices, User Interface to Web Services, and strongly felt the business changes.

Work Experience

Application Developer @ JPMorgan & Chase Columbus, OH 4/2012 – present

Working closely at retail banking: process information from ATMs and branches, DDA account, mortgage and tax

- Back-end SOA, system API and Web Services.
 - Transformed legacy UI report system into SOAP based web services APIs.
 - Integrated bank service and securities infrastructures into new systems. (axis, jaxws)
 - Built SOAP clients on IBM Rational Application Developer and Websphere.
 - Create Schemas and WSDLs for client call and use.
 - Intensive testing with SOAP-UI for SOA services.
- Test Driven Agile Development
 - Java Junit Automated Testing and Spring Testing Framework
 - Integrated with Maven/Ant Framework for continuous development, deployment and release.
- Project management
 - Intensively contributed to lifecycles of three major enterprise releases each year and 6 systems
 - Finalized concept, project estimates, requirements, development, test, and release;
- Front-end system refreshment SDLC.
 - Integrated Oracle Database, spring MVC, JSP, bootstrap and AJAX for continuous release.
 - Continuous staging on Apache Tomcat and Websphere running on AIX, Redhat and internal Cloud.
 - Responsive Design with Bootstrap CSS3, HTML5, and Single Page Application.
- System operation and support
 - Support of resilient operation based on ticket request.
 - Built and maintain DEV, IST, UAT, Product server environments.
- Alternative Tech and architecture
 - POC on different alternatives technologies such as SPA, Node.js, Ruby on Rail, Groovy on Grails, Python on Django, GWT, AWS, and security practices like spring security framework.

Linux Administration @casAlumni.org 2012- present

- Maintain Global infrastructures for <http://CasAlumni.org> ;<http://trans-new.com> <http://monevalue.com> <http://www.androidlits.com/>
- Configured DNS bind9, Qmail, Email Services, load balancing.
- Managed multiple domain names, web services, and websites

Senior Consultant @itransnew.com Columbus, OH 2011 – 2012

- Built and managed global technological infrastructures for training activities and infrastructures.
 - Built servers with RedHat, installed services and Klox control panel.
- Provided web related training and coaching services.
 - Taught web development courses to students.
 - Installed Wordpress, Drupal, Joomla scripts on web hosting servers and VPS.

- Staged node.js scripts on heroku and committed to EC2.

Research Associate

Ohio State University at Columbus 2010 - 2012

- Solved a NP problem: placements of wireless devices within commercial buildings for best performance with C#;
- Designed an efficient algorithm, and reduced the running time from days to seconds, beating IBM CPLEX.
- Designed network communication systems and built models to evaluate the performance.

Research Scientist

Chinese Academy of Sciences Beijing 2008 - 2010

- Adopt Event-Driven Mechanism in UI design for several projects such as GoBang, Minner, etc;
- Designed and built an information management system for Library with SQL Server and PowerBuilder;
- Created a stock trading simulation platform; Java Core Developer and WebMaster of gucasc2c.com
- Independently built a satellite imageries processing system to fast geo-correct imageries.
- Achieved locating accuracy to sub-meter level;
- Built a web search engine with Java Core, Servlets, JDBC, tomcat, Apache Lucene and open source crawler.

Expertise - Engineer

Language: XML, Java, Ruby, Node.js, Python, C++, SQL, HTML, Javascript, AJAX, UML, Matlab, R;
 Framework: Ruby on Rails, Groovy on Grails, Python on Django, Java on Spring;
 Back-end: SOA, JAW-WS, WSDL, Schema, Web Service, SOAP, Restful, Jason;
 Web Servers: Tomcat, Apache, Websphere, Nginx, IIS, Azure Cloud.

Expertise - System

Programming since 2003 and in-depth usages of data structures, algorithms, and software design patterns;
 Geospatial engineering, image processing and information retrieval, classification.
 OS: CentOS, Redhat, Ubuntu, IOS, android, Windows, DOS, *nix system administration and network administration.

Expertise – Data and Modeling.

Matlab 8 years experience, R, SAS, ETL, SQL, Hadoop, MapReduce,
 Oracle Database, NoSQL database like MangoDB.
 statistical modeling, financial engineering, data, time series analysis, random signal processing,

Selected Pulications

- Geometric Correction System For Remote Sensing Image Processing Based On RPC Model, AutoRPC V1.0, Registration: 2010SR072591, December 25, 2010. Center for Earth Observation and Digital Earth, Chinese Academy of Sciences, China.
- <http://www.ccopyright.com.cn/cpcc/RRegisterAction.do?method=list&no=fck> Patent
- Tianyou Kou, C. Emre Koksall and Eylem Ekici, "An Innovative Measure of CNT Device Quality", Under Review.
- Jia Liu, Tianyou Kou, Hanif D. Sherali, Qian Chen, "Optimal Femtocell Base Station Placement in Commercial Buildings: A Global Optimizaition." IEEE JSAC Issue on Femtocell Networks 2011.
- Jia Liu, Tianyou Kou, Hanif D. Sherali, Qian Chen, "Location Matters: Optimization Access Point Placement in 3-D Builidng Environment." MobiHoc 2012
- Dongmei Yan, Tianyou Kou (90% work), "Analysis of Narrow Ridge Estimation For Linear Ccd Rpc Model and Its Applications" 2009 IEEE International Geo-science and Remote Sensing Symposium(IGARSS09)
- Dongmei Yan, Fenfei Wang, Tianyou Kou (40% work), "Geometric Evaluation of SPOT5 Image Using Rigorous Sensor Model and Simple Polynomial Direct Location Model" The Sixth International Symposium on Digital Earth (ISDE6).

Education

- ✓ MS in Computer Engineering, The Ohio State University, Columbus, 6/2010-3/2012
- ✓ MS in Information Processing, Chinese Academy of Sciences, Beijing, 2007 -2008
- ✓ B.S. Information and Computational Science (Math), Harbin Institute of Technology, Ranking 1/150, 9/2003-7/2007

Certifications

- ✓ SOA Web Services for JEE Developers using RAD 7.5 ProTech 4/2013
- ✓ Spring Frameworks for JEE Developers ProTech 9/2013