

FIRAT KART

CONTACT INFORMATION

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mobile:

OBJECTIVE

Seeking position as a presales engineer to manage POCs; work with development team to convert these into great success stories

EDUCATION

University of California, Santa Barbara, CA USA

❖ **Ph.D.**, Electrical and Computer Engineering, June 2008

❖ **M.S.**, Electrical and Computer Engineering, December 2006

Bilkent University, Ankara, Turkey

❖ **B.S.**, Computer Science, June 2004

WORK

Tibco Software (Palo Alto, CA USA), Architect

2008 - current

EXPERIENCE

Participate in next generation ***distributed in memory data grid product***, ActiveSpaces

I have been involved with development of ActiveSpaces produce since I joined at Tibco Software. ActiveSpaces was a very good fit for me to investigate my distributed systems skills, programming language skills including C/C++/Java and finally .NET for last 3 months. I have a wide knowledge of how everything works in harmony which gives me ability to isolate issues, address them in a timely manner, and complete POCs for new feature and demo quickly. Below are some highlights of my responsibilities, not limited to all.

- ❖ **Develop C/C++ core libraries to provide necessary functionality to Java/C/.Net APIs**
 - Develop fault tolerance distributed protocols
 - Develop group membership protocol (GMP) to provide coherency in a distributed environment
 - Develop data distribution using consistent hashing (CHA) on top of GMP
 - Performance testing of the system to optimize various aspects of the core libraries
- ❖ **Contribute to Java API to interact with the C core libraries using Java Native Interface**
 - Design the JNI architecture to provide improve the performance
 - Provide necessary C side interfaces for .net to interact the core libraries
- ❖ **Implement necessary features as a POC and convert the ideas into features and productize in a short time**
 - Implement Query parser and indexing feature (Pending patent on the in-memory indexing solution)
 - Implement Remote Method Execution feature as a POC and make a big feature
- ❖ **Provide support** for field people with their POCs, work closely with them to achieve a successful POC. Support in-house project integration and design/implement new features as required

ActiveSpaces has become one of the core products of Tibco and most of the in-house projects have integrated the product to replace the existing in-memory solutions and/or provide a front-end in-memory distributed cache solution for their database back-ends. I have been involved in all these product integrations and decide/support necessary feature requirements. BusinessEvents™ was the most challenging ActiveSpaces integration which was a big success for this driving solution of Tibco and ActiveSpaces reputation.

Citrix Online (Goleta, CA USA), Research Scientist Intern

Summer 2007

- ❖ Improve scalability, availability of next generation GoToMeeting product
 - Investigate Oracle Coherence in memory solution
 - Investigate Terracotta as an alternative to Coherence

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- ❖ Investigate Amazon S3 (Simple Storage Service) as media storage alternative for GoToMeeting recordings
 - *Prototype Media Management Tool using Amazon S3*

At Citrix online, I was involved mainly on doing necessary research work and provide them a scalable in-memory data-grid solution. Necessary proof of concepts took my summer intern and I demoed the results and evaluations to the whole engineering team.

QAD Inc. (Carpentaria, California USA), Software Engineer Intern **Summer 2006**

- ❖ Development of Inventory Visibility and Interoperability (joint project with AIAG)
- ❖ Design web service architecture of IV&I project using Axis2 WS Framework
 - Provide generic application API for the architecture
 - Develop prototype using axis2 framework, based on Spring
 - Represent the company at AIAG Summer 2006 meeting, Detroit

At QAD, I was given responsibility to drive the research direction for the development of IV&I project. Prototyping their future solution was one of the main challenges of this internship.

ACADEMIC EXPERIENCE

Research Assistant

- ❖ Advisor, Prof. Louise Moser **2005 - 2008**
 - Research interests: Cutting edge web technologies, Web services, Service Oriented Architectures, Database systems
 - Thesis "*Architectures and Protocols for Collaborating Applications spanning multiple enterprises*" supported by QAD and UCSB scholarships
- ❖ *8 conference papers, 5 journals and 1 magazine chapter on Distributed systems, Service oriented architectures, Syndication protocols and Database protocols.*

SKILLS

- ❖ **Programming Languages:** Java, C/C++, J2EE, J2ME, JSP, PHP, Scripting
 - **Interests:** Distributed Systems, Database systems, Web applications and multi-tiered systems, Object Oriented Analysis and Design, Information Retrieval, Data Management, Load and Performance Testing, Proof of Concepts of new features/product integrations
 - **Significant experience:** Distributed systems, multicast protocols, TCP/IP protocols, networking, SQL
- ❖ **Miscellaneous:** ActiveSpaces, Business Works, Rendezvous multicast, Pragmatic General Multicast (PGM), Planet-lab, Coherence, Terracotta, GigaSpaces, Rome Atom/RSS framework, ANTLR
- ❖ **Applications:** Netbeans, IntelliJ, Eclipse, Visual Studio, MySQL, QualNet, Matlab, Photoshop, Rational Rose, Business Works
- ❖ **Operating systems:** Windows, Linux/Unix, Solaris, Hp Itanium

AWARDS

- ❖ 1st place in *International Services Computing Contest*, Utah 2007
- ❖ Outstanding teaching assistant award for Network computing course, Winter 2006
- ❖ Scholarship for graduate study from University of California, Santa Barbara

HOBBIES

Running, playing soccer, dancing, swimming, pc/console gaming, listening to music, traveling, playing tennis/golf, sailing