Kartik Deshpande

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EDUCATION

Binghamton University, State University of New York, Watson School of Engineering **Expected May 2019**
sMaster's of Science in Computer Science

KLS Gogte Institute of Technology, Belgaum, India **May 2016**
Bachelor's of Engineering in Computer Science

TECHNICAL SKILLS

Languages: Python, Java , C ,C++, PHP, Javascript
Software : Git, Pycharm , IntelliJ ,Eclipse, Vim
Database : MySQL , Postgresql ,Oracle, Cassendra
Client/Server : Google's protocol buffer, Apache thrift, Apache and Nginx Web server
Additional: Sound knowledge of TCP/IP familiarity, Java web applets

PROFESSIONAL EXPERIENCE

Binghamton University, Research Project Assistant Binghamton, NY, **November 2017 - Present**
- On going development of a Web based project on Product Inventory system.

Shreshta IT Technologies pvt ltd, Software Developer Belgaum, India, **June 2016 – June 2017**
- Built a Personalized Cloud Data storage application and data storage file server with active directory integration.
- Designed a Virtual Private Network software having remote access and site to site VPN.
- Designed a Linux based Network Firewall.
- RESTful API Development using Flask.
- Developed a Web Filtering software using Iptables and squid proxy server.
- Developed web applications.
- Working knowledge under database management ie. mysql , postgresql.

PROJECTS

A Cassendra type Distributed NoSQL database *(python)*
- Supports scalability and high availability without compromising performance by implementing eventual consistency.
- Data is automatically replicated to multiple nodes for fault-tolerance.
- Implementation of Read repair and hinted handoff to handle inconsistent data in replicas because of eventual consistency..
- Similar to Cassendra client can configure consistency levels when issuing a request.

Movie Recommendation system *(java , scala and C)*
- Built by integration of three programming paradigms (procedural , functional and object oriented).
- Java to provide a web based user interface.
- Scala integrated with Java to use a ranking algorithm to rank movies on per user basis.
- C to initially populate database with existing movies from movie list and refine user search history.

Distributed banking application using google's protocol buffer *(python)*
- Controller provides initial balance to the branches. Random amount of money transfers at random time intervals (1 to 5 seconds). Transfer takes place continuously between random pairs of branches.
- Controller captures global snapshots using Chandy-Lamport algorithm.
- Global Snapshot consists of local balances along with money in communication channels for all branches at a particular time.
- correctness of a snapshot can be verified by comparing summation of a snapshot against total initial balance.

Distributed File Server using Apache Thrift RPC Framework *(python)*
- This file server is a chord research paper implementation. It support read, write operations on files at remote chord ring nodes. Implemented using sha256 hashing.
- Write File : A client can write a file to the server it has access to, the server will find the appropriate node based on the file's key and write the file to that node.
- Read File : A client can issue read request to server it has access to, the server then provides the file to the client from the node where it had previously written.

A ROB based Pipeline Simulator *(java)*
- Implemented a pipeline processing simulator in java.
- Supports Register-to-register instructions, Memory instructions and Control flow instructions.
- Implements register renaming and use of physical register and memory bypassing.
- Instructions can be issued and completed out of order which makes it more efficient.

Port Checker *(python)*
- A web-based interface written in Flask (Micro framework for Python) which checks if a port is open or closed of a remote server/network.