

Kartik Deshpande

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EDUCATION

Binghamton University, State University of New York, Watson School of Engineering
Master's of Science in Computer Science

Expected May 2019

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

May 2016

TECHNICAL SKILLS

Languages: Python, Java , C ,C++, PHP, Javascript
Software : Git, Pycharm , IntelliJ ,Eclipse, Vim
Database : MySQL , Postgresql ,Oracle, Cassandra
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 PHP based Web project on Product Inventory system.
- Implement, monitor and maintain changes to webpages via CMS.

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.
- Reverse Port tunneling for bypassing blocked / closed networks.
- Developed a Web Filtering software using Iptables and squid proxy server.
- Developed web applications.
- Working knowledge under database management ie. mysql , postgresql.

PROJECTS

A Cassandra 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 Cassandra 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.
- 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.

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.
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