

## 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**

Courses: Distributed Systems, Computer Security, Computer Architecture, Programming Languages, Design and analysis of algorithm, Operating Systems.

**KLS Gogte Institute of Technology**, Belgaum, India

**May 2016**

Bachelor's of Engineering in Computer Science

Courses: Data Structures and Algorithm, Operating Systems, System Software, Database Systems, Computer and Storage Area Networks, Formal Languages and Automata, Compiler Design, Object Oriented Programming and Modeling, Programing the Web.

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### TECHNICAL SKILLS

**Languages:** Python, Java , C ,C++, PHP, Shell Scripting, 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 Networking protocols, Java web applets

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### 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.
- Configure, deploy and support desktop, laptop, and associated software.

**Shreshta IT Technologies pvt ltd, Software Developer**

Belgaum, India, **June 2016 – June 2017**

- Built a Personalized Cloud Data storage application and file server with active directory integration.
  - Designed a Virtual Private Network software having remote access and site to site VPN.
  - Developed 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 proxy server.
  - Developed web applications.
  - Working knowledge under database management ie. mysql , postgresql.
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### 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 time.

**A ROB based Pipeline Simulator ( 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 - flask )**

- A web based application written with Flask ( Micro framework for Python ) which checks if a port is open or closed of a remote server/network.
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