

Kartik Deshpande

18 Haendel St 2FL, Binghamton NY 13905 | 607-374-0473 | kartikdeshpande18@gmail.com | <https://github.com/deshpandekartik>

EDUCATION

State University of New York at Binghamton, Binghamton, NY

August 2017 - Present | GPA 3.7

Master's of Science in Computer Science.

Courses: Distributed Systems, Cloud Computing, Computer Security, Design and analysis of algorithms, Operating Systems, Design Patterns, Programming the Web, Computer Architecture, Programming Languages.

KLS Gogte Institute of Technology, Belgaum, India

August 2012 - May 2016 | GPA 3.5

Bachelor's of Engineering in Computer Science.

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

WORK EXPERIENCE

The Research Foundation for SUNY, Research Assistant

Binghamton, NY, **November 2017 - Present**

- Developed a Web project on Product Inventory system.
- Development and maintenance of research health forms , HTML/CSS , jquery, MySQL, PHP.
- Implement, monitor and maintain changes to web pages via CMS.

Shreshta IT Technologies pvt ltd, Software Developer

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

- Built a Personalized secure 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 and Dockerized a Software Update distributed application, made it portable and cloud vendor independent.
 - Reverse Port tunneling for bypassing blocked or closed networks.
 - Developed a Linux based Network Firewall and a Web Filtering software with a proxy server.
 - Implemented a failure recovery mechanism, to switch from one ISP to another, when one goes down via IP routing.
 - Developed web applications and RESTful APIs using Flask.
 - Also worked as a System Administrator managing networks, databases and OS with over more than 200 servers.
-

PROJECTS

A Cassandra type Fault tolerant 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, implementing Read repair and hinted handoff

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 (JSP), C to initially populate database.
- Scala integrated with Java to use Cosine similarity algorithm to match similarity of two users to rank movies.

Distributed banking application using google's protocol buffer (python)

- Implemented a multi threaded Chandy–Lamport algorithm to capture global snapshots (state of all branches) by sending marker messages. The snapshot includes balance of all branches and the money in transit from one branch to another.

Assembly Language Simulator (c++)

- 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.

WatchFS (python – FUSE, Django and flask)

- A software layer between the file system and the user which intercepts system calls and records the activities happening on the File System in real time and sends it to a remote server via flask REST API, developed in FUSE

Other Projects

- Distributed File Server with hash table (Python and Apache Thrift), Naive bayes classifier (java), RSA encryption based voting system (python), SSL client server communication (java), Crude document searcher (NodeJS, MongoDB).
-

TECHNICAL SKILLS

Languages : Python, Java, C, C++, PHP, Shell Scripting, NodeJS.

Software : Git, Docker, Pycharm, IntelliJ, Eclipse, Trello, Vim.

Database : MySQL, Postgresql, MongoDB, Oracle, SQLite.

Additional : Google's protocol buffer, Apache thrift, Apache and Nginx Web server, TCP/IP protocols,

ACHIEVEMENTS

- Won the best security hack project at HackBU 2018 (hackathon at Binghamton University), the project was built in a span of 24 hours.
- Completed online courses 'Cyber Security' and 'Computer Networks' from edX and Coursera.