

**EDUCATION:****M.S in Computer Science, University at Buffalo** *GPA: 3.8/4.0*

Aug 2015 – May 2017

**B.E. in Computer Science, Walchand Institute of Technology** *Aggregate: 71.62/100*

Aug 2009 – Jun 2013

- Relevant Coursework: Large Scale Distributed Systems, Deep Learning, Big Data and Machine Learning, Parallel and Distributed Processing, Data Structures and Algorithms, Algorithms for Modern Computer Systems, Operating Systems, Introduction to Machine Learning, Software Engineering, Computer Networks.
- Recipient of merit scholarship for undergraduate studies from the Ministry of Human Resource Development, Government of India.

**WORK EXPERIENCE:****Rutgers Discovery Information Institute, Technical Assistant Seasonal:** (*CometCloud, Java*) May 2016 – July 2016

- Responsible for implementing new features in CometCloud, an autonomic engine for distributed computing.
- Added a framework for dynamic plugging of new schedulers.
- Implemented and conducted experiments to analyze the performance of OSGConnect (Open Science Grid Connect) workers.

**Persistent Systems Ltd., Software Engineer:** (*Java, Elasticsearch, PostgreSQL, Spring*)

Aug 2013 – June 2015

- Worked as a part of the application development team in a genomic analysis project.
- Reduced the time required for an in-house variant calling workflow by up to 75% by using parallelism and multi-threading on a multi-core system.
- Improved performance of an in-house Integrative Genomics Viewer by up to 50% by refactoring the code, using design patterns and redesigning data structures.

**TECHNICAL SKILLS:**

- **Languages:** Java (expert), C (proficient), C++ (proficient), JSP, Servlet, Cilk+, JavaScript, Python, Bash shell.
- **Databases:** DynamoDB, Marklogic, MySQL, PostgreSQL.
- **Others:** Hibernate, AWS, Hadoop Map-Reduce, Spark, JSON, Spring, ElasticSearch, Android, Git, Mercurial, HTCondor, SLURM, JUnit, Maven, Ant, Eclipse.
- **Operating Systems:** Ubuntu, Linux, Windows.

**PROJECTS:** (*MORE AT GITHUB.COM/AJAY191191*)**Federated Genomes:** (*Java, CometCloud, GATK, Samtools, Picard*)

Aug 2015 – Ongoing

- Developing an application for detecting variants in a genomic file. The application, developed using CometCloud, can be run on distributed heterogeneous computational federations.  
GitHub link: <https://github.com/Ajay191191/CometCloudWorkflow>

**Kernel development of OS161 Linux-like kernel:** (*C*)

Jan 2016 – May 2016

- Implemented synchronization primitives, system calls (open, read, fork, exec) and virtual memory management including TLB management, demand paging and swapping.

**Dynamo style DHT (Distributed Hash Table):** (*Java, Android*)

Jan 2016 – May 2016

- Implemented replicated key-value storage supporting membership, request routing, chain replication and failure handling with concurrency, multi-threading, multicasting, fault tolerance and fault detection on Distributed Android mobile devices.

**Handwritten Digit Classification:** (*Python, SciPy, NumPy*)

Jan 2016 – May 2016

- Implemented and evaluated the performance of Multilayer Perceptron Neural Network in classifying handwritten digits. Compared it with other methods such as linear, non-linear and ridge regression.

**Election Predictor:** (*Java, Hadoop, Marklogic*)

Jun 2012 – Jun 2013

- Analyzed political proclivity based on real-time data from Twitter using a small Hadoop cluster. Performed indexing, clustering and sentiment analysis on this data based on: location, political parties and candidates. Increased efficiency by tackling the Hadoop small files problem.