

# Yash Gangrade

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## EDUCATION

**Master of Science (M.S.)** | *University of Utah, Salt Lake City, UT* **Aug 2017 – May 2019**

- Major in Computer Science with specialization in Data Management and Analysis **GPA: 4.0**
- Graduate Teaching Assistant for Scientific Computing, Software Engineering and Probability & Statistics.

**Bachelor of Technology** | *Indian Institute of Technology Roorkee (IIT R)* **July 2013 - June 2017**

- Major in Electronics and Communication Engineering and Minor in Computer Science. **GPA = 8.6/10.0**

## PROFESSIONAL EXPERIENCE

**Symantec Corporation, Draper, Utah** | *Software Engineering Intern* **May 2018 – July 2018**

Project title: “R&D on Data Storage and Management policies of Authentication and Reporter product”

- Developed new file allocation strategies and algorithms to separate the storage of internal files to Solid State Drives and Spinning Disks. Processing speed increased by 25% compared to the existing system.
- Designed novel file indexing schemes to change the underlying data structures i.e. Paged AVL Tree to B+ Tree. Latter is faster than the former in Search and Insert operations. Gained 30% increase in the speed of the system.

**Samsung R&D, Bangalore, India** | *Software Engineering Intern* **May 2016 – July 2016**

Project title: “Developing Application Layer protocols for a Live TV Broadcast System for 4G LTE Platform”

- Designed, optimized and bootstrapped the open source Forward Error Correction codes using techniques like parallel computing and lookup tables to maintain stringent memory and processor constraints.
- Designed a smart feedback-learning mechanism capable of changing parameters depending on the channel conditions. Used Reinforcement Learning approaches. The team followed the SCRUM Agile framework.
- Reduced the bandwidth usage by 40% and made the system 3 times faster.

## SOFTWARE SKILLS

- C, C++, Python, R, Java, Bash/Shell, LaTeX, HTML, CSS, JavaScript, D3, SQL, MATLAB
- Git, Perforce, Mathematica, ParaView, OpenStreetMaps, Leaflet, Arduino, Adobe Illustrator

## TECHNICAL PROJECTS

**Development of a Database System** ([GitHub Repository](#)) **Aug 2018 – Dec 2018**

- Created a basic Database System from scratch, implementing several modules like buffer management engine, disk-based B+ tree indexing engine, query optimizers, support for join, union etc. operators. Used Java for development.

**Visualizing Crime Landscape of Salt Lake City** ([Live Website](#), [GitHub Repository](#)) **Oct 2018 – Dec 2018**

- Developed different visualization techniques and filters to select from multiple crime types and show the markers on Map along with line, bar, pie charts to provide detailed information. Used Leaflet, OSM, D3.js, HTML, CSS for development.

**Local Linear Classifiers Ensemble** ([GitHub Repository](#)) **Sep 2017 – Dec 2017**

- Built a system which utilizes a combination of multiple linear classifiers to classify the different classes in N-Dimensional spatial data. Classification accuracies improved by 5-20% using this novel system compared to a single classifier.

**Distributed Learning and Adaptation in Cognitive Radio** ([Thesis](#)) **Apr 2016 – Apr 2017**

- Designed a system with channel selection and access which can effectively adapt to a wide range of traffic load patterns in the primary network. A distributed adaptive learning and access policy and game theory approach was employed.

## POSITIONS OF RESPONSIBILITY

**Coordinator** | *Artificial Intelligence and Electronics Society (ArIES), IIT R* **Aug 2014 – May 2017**

- Mentored & worked with 120 students on several projects. Gave lectures related to Computer Science and Electronics.

**Member** | *IEEE Students Chapter* **Aug 2014 – May 2017**

- Organized various events, guest lectures, and tech-talks with professors who share their research experience.

**Graphic Designer** | *Geek Gazette – The Official Technical Magazine, IIT R* **Aug 2013 – May 2017**

- Designed 25+ articles and 3 websites for the official communicate for inquisitive, neophilic and tech-savvy community.