Yash Gangrade

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EDUCATION

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

- Major in Computer Science *(Expected Graduation: May 2019)* **GPA: 4.0**
- Graduate Teaching Assistant for Software Engineering and Probability & Statistics.

Bachelor of Technology | ***Indian Institute of Technology Roorkee (IIT R)*** **July 2013 - May 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 Look-up and Insert operations. Gained 30% increase in the speed of the system.

Samsung R&D, 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 SCRUM Agile framework.
- Reduced the bandwidth usage by 40% and made the system 3 times faster.

LANGUAGES AND SOFTWARE PACKAGES

- C, C++, Python, R, Java, Bash/Shell, LaTeX, HTML, CSS, JavaScript, D3, SQL, MATLAB
- Git, ParaView, Perforce, 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.

Compression of Neural Networks with Gaussian Mixture Priors (GitHub Repository) **Jan 2018 – Apr 2018**

- Implemented a Soft Weight Sharing system (in Python) for compression of a Neural Network with the aim to store multi-million parameter network on small devices like phones. Tested on MNIST dataset and found better results.

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.

LEADERSHIP AND 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 communique for inquisitive, neophillic and tech-savvy community.