

## Heer Ambavi

Senior Undergraduate

Discipline of Computer Science and Engineering

Indian Institute of Technology Gandhinagar

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### ACADEMIC DETAILS

Degree	Institution	CPI/%	Year
Graduation*	IIT Gandhinagar	8.78	2016-Present
HSC (CBSE)	St. Kabir School, Ahmedabad	95.5	2015-2016
SSC (CBSE)	St. Kabir School, Ahmedabad	10.0	2013-2014

### INTERNSHIP

- **Intern, Member of Technical Staff, Nutanix Technologies India Pvt. Ltd.** [January'19-June'19]  
Worked with *Micro Services Platform*(MSP) Team on moving monolith services to a containerized solution using Docker and Kubernetes.
  - *MSP Health Diagnostics* :
    - \* Designed and developed MSP Health Check tool for MSP platform diagnostics, which sequentially runs platform, cluster and VM level checks to detect any health issues.
  - *Testing and Automation* :
    - \* Automated and merged 30+ testcases for service deployment on MSP
    - \* Reported 15+ issues, and resolved 10+ bugs during the testing
    - \* Scheduled and executed test jobs, leading to significant QP improvement for GA release
  - Developed a Command Line Interface Tool in Golang for easy DB updates using RPCs, which is being used for development testing.
  - Merged the implemented changes with the master branch for GA release.

### PROJECTS

- **BioGen: Automated Biography Generation** [August'18 - March'19]  
*Prof. Mayank Singh, IIT Gandhinagar*
  - Adapted classification algorithms and text summarization techniques to auto generate biographies from a given user dataset
  - **Publication:**
    - \* Heer Ambavi\*, Ayush Garg\*, Ayush Garg\*, Nitiksha\*, Mridul Sharma\*, Rohit Sharma\* and Jayesh Chaudhary, Mayank Singh. 2019. *BioGen: Automated Biography Generation*. In proceedings of JCDL'19 June 2 – 6, 2019, Urbana-Champaign, Illinois.,4 pages. ACM Digital Library
- **Gandhipedia** [August'19 - Present]  
*Prof. Mayank Singh, IIT Gandhinagar and Prof. Animesh Mukherjee, IIT Kharagpur*
  - Created Social Networks depicting *People* and *Places* in Gandhi's life, based on his autobiography, and analysed the networks using community detection and centrality measures
  - Developed an interactive web portal 'Gandhipedia' using Python-Flask and plotly to visually depict the Social Networks
  - Worked on digitization and boundary detection for scanned image PDFs of Gandhian literature
- **SQL on Buckets** [June'19]  
*UHack hackathon, Nutanix Technologies India Pvt. Ltd.*
  - Implemented continuous real time SQL querying with dynamic multi-schema support for unstructured data logs stored in Object Store
  - Visually depicted the analysis of query-fetched data on a user-interactive dashboard
  - Implemented a distributed, scalable solution for the problem deployed using Kubernetes in 3 days
- **Asymmetric Cryptosystem on FPGA (Digital Systems Course)** [November'17]
  - Designed, simulated and implemented a client-server model for hardware-based key generation, encryption and decryption algorithms for RSA cryptosystem using Verilog on FPGA

- **MapReduce on C** (*Operating Systems Course*) [November'18]
  - Implemented MapReduce on C using multi threading and used the implemented MapReduce Library for simple applications such as Basic Image Processing and Word Count
- **Finding densest subgraphs** (*Advanced Data Structures and Algorithms Course*) [March'18]
  - Implemented exact solution (Goldberg's Algorithm) and a Greedy-2 approximation (Charikar's Algorithm) for the Densest Subgraph problem on Python
  - Compared the performance of both algorithms on various datasets and visually depicted the results using Cytoscape
- **Face Recognition System** (*Probability and Random Processes Course*) [November'18]
  - Built a face recognition system in Python using Eigenfaces, trained and tested using public face datasets

#### ACADEMIC EXCELLENCE

- Awarded the prestigious *Dean's List for Academic Excellence* for Semester I and II, Academic Year 2016-17, and Semester I and II, Academic Year 2017-18.
- **Certified Cyber Security Expert** (*eCCSE, eSecurify Ahmedabad*)

#### TECHNICAL SKILLS

- Python • C • GoLang • Verilog • HTML • CSS • MATLAB • Linux • Windows
- ISE Design Suite • MS Office • Autodesk Inventor •  $\text{\LaTeX}$  • Arduino • FPGA • Raspberri Pi

#### RELEVANT COURSES

- Data Structures and Algorithms • Advanced Data Structures and Algorithms • Theory of Computation
- Discrete Mathematics • Computer Organization and Architecture • Operating Systems • Digital Systems
- Probability and Random Processes • Linear algebra and ODE • Natural Language Processing
- Artificial Intelligence • Probability, Statistics and Numerical Methods

#### EXTRA-CURRICULAR ACTIVITIES

- Team member, **Women's Volleyball team** (*IIT Gandhinagar*) [2016-2018]
  - Represented IIT Gandhinagar at 52<sup>nd</sup> Inter-IIT Sports Meet and various inter-college sports events.
- Member, **Professional Development Council**, Student Council (*IIT Gandhinagar*) [2018-2019]
  - Conducted various sessions and workshops on professional development for the student community
- Core Committee Member, **HallaBol'18**, Annual Sports Fest (*IIT Gandhinagar*) [March'18]
  - Organized 13 sports events over a period of 10 days that witnessed the highest participation from the community with more than 3600 participants

#### SOCIAL WORK

- Volunteer, **NYASA**, student run community outreach program (*IIT Gandhinagar*) [2017-Present]
  - Working towards improving health and education of construction workers through NYASA School
  - Volunteered at various cloth distribution drives and flood relief campaigns
  - Coordinated health awareness events at Sanjeevani, an Annual 2-day, health and awareness camp of NYASA