

Gayatri Patankar

+1 4042034289

gpatankar3@gatech.edu

gayatri7.github.io

gayatri7

Summary

I'm interested in computer systems, robotics, and security and privacy with a motivation towards making a real world impact.

Education

- MS Georgia Institute of Technology**, Computer Science Aug. 2023 - May 2025 (expected)
Atlanta, USA
- GPA: 3.5/4.0
 - Coursework:** Secure Computer Systems, Computer Networks, Advanced Operating Systems.
- BE Birla Institute of Technology and Science, Pilani**, Computer Science Aug. 2019 - July 2023
K. K. Birla Goa Campus
- GPA: 8.38/10
 - Thesis:** Design and Implementation of **Mixed Criticality Systems** for CubeSats

Work Experience

- Operations Engineering Student Assistant**, Georgia Institute of Technology, Office of Information Technology Jan 2024 - Present
Atlanta, USA
- Created performance metrics for IT infrastructure team.
 - Supported the regular operation of Georgia Tech's information system.
- Research Intern**, National Chemical Laboratory May 2021 - July 2021
Pune, India
- Created a database of flow chemical reactions with MySQL and Python.
 - Worked as part of an interdisciplinary team.

Projects

- Design and Implementation of Mixed Criticality System for a Nanosatellite** Jan. 2023 - May 2023
- Developed a modified version of FreeRTOS supporting the EDF-VD scheduling algorithm for mixed criticality jobs.
 - Studied functional safety standards such as ISO 26262 and ensured the system's conformity to it.
- Active Safety for Autonomous Vehicles** Jan. 2024 - Present
- Researched algorithms for autonomous racing using ROS with Nvidia's Jetson TX2.
 - Used sensors such as stereo camera and LIDAR.
- Class Scheduling with Genetic Algorithm** Sep. 2023 - Dec. 2023
- Created an academic schedule generator based on the classes offered for MS CS students at Georgia Tech.
 - Used Tensorflow and evolutionary algorithms to generate the best possible schedule for an individual.

Teaching

- Teaching Assistant**, Database Systems, Computer Architecture, Computer Networks May 2022 - July 2022
Goa, India
- Taught tutorials of over 300 students, conducted lab sessions, created and graded assignments to augment learning.

Head Mentor, Spacecraft Computer Systems , Quark Summer Technical Projects <ul style="list-style-type: none"> Designed course material to cover the theory and practice of flight software, including real time systems and attitude control. Taught weekly classes and assisted students in building their own flight software modules. 	Jan 2022 - May 2023 Goa, India
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Leadership and Volunteering

Treasurer , Graduate Pride at Georgia Tech <ul style="list-style-type: none"> Executive board member of Georgia Tech's LGBTQ+ graduate student organization. 	March 2024 - Present
Core Member , Queerious BITS <ul style="list-style-type: none"> Regular contributor to BITS Goa's LGBTQ+ student support group. Educated 500+ students about LGBTQ+ issues by writing social media posts. Advocated for recognition and dignity of the community. Mentored a team of students to carry forward these activities. 	Jan. 2020 - May 2023
On Board Computing Lead , Project EINSat <ul style="list-style-type: none"> Core member of BITS Goa's student CubeSat project with the science mission of detecting exoplanets. Led a subteam of 5 students in building the computer system for this nanosatellite. 	Jan. 2022 - May 2023
Core Member , SEDS Celestia <ul style="list-style-type: none"> Participated in the leadership of BITS Goa's SEDS chapter, particularly in the night sky observations team. Taught telescope handling and operations to around 50 students. Led project to build low cost go-to telescope mount with Arduino. 	Sep. 2019 - May 2023
Volunteer Teacher , Abhigyaan at BITS Goa <ul style="list-style-type: none"> Taught underprivileged women and children English weekly in an effort to better their station in society. 	Sep. 2019 - Sep. 2021

Technologies

Languages: C, C++, Java, Python, SQL, Bash, Verilog

Software: FreeRTOS, ROS, Tensorflow, Wireshark, GNU Debugger, Android Studio