

**Chinmay Senapathi** [cksenapathi@utexas.edu](mailto:cksenapathi@utexas.edu) [linkedin.com/in/ChinmaySenapathi](https://www.linkedin.com/in/ChinmaySenapathi)

## EDUCATION

---

University of Texas at Austin, MS/PhD Aerospace Engineering August 2022-Present

University of Texas at Austin, BS Aerospace Engineering August 2019-May 2022  
GPA: 3.7/4.0

## RELEVANT SKILLS

---

C++, ROS/MAVROS, CUDA C/C++, Python, Numpy, Tensorflow, PyTorch, Java, SolidWorks

## RESEARCH AND INTERNSHIP EXPERIENCE

---

**Software Engineering Intern**, Aptronik May 2022-August 2022

- Implemented test plugins to characterize actuator architecture, sensor, and controller performance
- Analyzed gathered data to compare theoretical actuator performance to empirically calculated actuator performance
- Documented all results and implications on performance in report submitted to client

**Research Assistant**, Dr. Takashi Tanaka, University of Texas at Austin June 2021-September 2021

- Researched and implemented coordinated global path-planning for swarm of 10 Crazyflies
- Collaborating with PhD students to implement experiments verify theoretical results on Quanser Qbot2e
- Wrote preliminary review on methods for novel field of event-camera compression

**Software Engineering Intern**, Charles River Analytics May 2021-August 2021

- Implemented ROS node to pull and process regular data stream from USB radiation sensor
- Researched and reported communication interfaces to extend computational capability of autonomous drone
- Designed unsupervised learning methods to expand object detection training dataset

**Research Assistant**, Dr. Maruthi Akella, University of Texas at Austin March 2020- July 2020

- Self-studied graph theory and graph convolution to design point cloud classification method
- Presented a summary of point cloud computer vision tasks after thorough research
- Summarized updates on research project progress through bi- or triweekly meetings

## CLUB WORK & SELF-STUDY

---

**Texas Aerial Robotics**, Project Manager, University of Texas at Austin August 2019-May 2022

- Designed and implemented a collaborative RTAB-SLAM exploration algorithm based on RRT and information gain
- Set and explained year-long vision of C-SLAM Swarm combined with Payload Manipulation to software team
- Implementing computer vision algorithm for real-time estimation and prediction of attitude of swaying mast

**NASA MINDS Competition** August 2021-May 2022

- Designing and implementing hexapod structure for autonomous swarm agents
- Researching and applying papers on swarm dynamics to ensure robustness of swarm software
- Implementing depth perception and step planning for better stability over rugged terrain of Moon