

# SIDHARTH TALIA

·LinkedIn [↗](#)

## EDUCATION

---

|   |  |
|---|--|
| <b>University of Washington Seattle</b><br>– Paul G. Allen School of Computer Science<br>Ph.D. in Computer and Information Science  | 2022 - 2027<br>WA, USA<br>Cumulative GPA: –            |
| <b>Guru Gobind Singh Indraprastha University Delhi</b><br>– Bharati Vidyapeeth College of Engineering Delhi<br>Bachelor of Technology in Electrical and Electronics Engineering | 2016 - 2020<br>Delhi, IND<br>Cumulative GPA: 8.81/10.0 |
| <b>Sardar Patel Vidyalaya, Delhi, India</b><br>– CBSE<br>Class 12th, Computer Science   | 2014 - 2016<br>Delhi, IND<br>Percentage: 93.4%         |

## EXPERIENCE

---

|  |  |
|--|--|
| <b>University of Washington Seattle</b><br><i>Graduate Research Assistant, Advisor: Dr.Siddhartha S. Srinivasa</i> <a href="#">↗</a> <ul style="list-style-type: none"><li>Working on the next version of MuSHR for outdoor off-road autonomy.</li></ul>   | September 2022 - Present<br>WA, USA        |
| <b>Indian Institute of Technology(I.I.T.)-Delhi</b><br><i>DLive project Assistant, Advisor: Dr.Sunil Jha</i> <a href="#">↗</a> <ul style="list-style-type: none"><li>Working on Odometry aided lane position estimation and navigation in adverse Indian environments</li></ul>  | Jan 2022 - July 2022<br>Delhi, IND         |
| <b>Open source contributor</b><br><i>Open source contributor - University of Washington's MuSHR project</i> <ul style="list-style-type: none"><li>MuSHR multi-agent navigation team lead, focusing on object manipulation/pushing</li><li>Developed local-controller framework along with an autotest system for evaluation</li><li>Incorporating Deep learning into the MuSHR stack.</li></ul>  | April 2020 - April 2022<br>Delhi, IND      |
| <b>Consultant/Freelance software engineer</b><br><i>Self-employed</i> <ul style="list-style-type: none"><li>Providing consultancy/software engineering services to start-ups in the automation sector</li></ul>  | October 2020 - December 2021<br>Delhi, IND |
| <b>Indian Institute of Technology(I.I.T.)-Delhi</b><br><i>DLive project intern, Advisor: Dr.Sunil Jha</i> <a href="#">↗</a> <ul style="list-style-type: none"><li>Worked on the odometry system used by the car for navigation</li><li>Developed and tested Classical CV based lane-detection and keeping system for curved roads in simulation</li></ul>  | June 2019 - July 2020<br>Delhi, IND        |
| <b>Botlab Dynamics (incubated in I.I.T. Delhi)</b><br><i>RnD intern</i> <ul style="list-style-type: none"><li>Developed Gunnar-Farneback optical flow based visual odometry system</li></ul>   | February 2019 - April 2019<br>Delhi, IND   |
| <b>Indian Institute of Technology(I.I.T.)-Delhi</b><br><i>Celestini program India 2018 project intern, Advisor: Dr.Aakanksha Chowdhery</i> <a href="#">↗</a> <ul style="list-style-type: none"><li>Created an Advanced Driver Assistance System (ADAS) coupled with V2V communication <a href="#">↗</a></li><li>Developed a Gunnar-Farneback optical flow based collision prediction system. Tested in simulation and with real world data</li></ul> | June 2018 - August 2018<br>Delhi, IND      |
| <b>Omnipresent RobotTech</b><br><i>Intern</i> <ul style="list-style-type: none"><li>Created basic projects to learn about control systems, state estimation, hardware design, and basics of computer vision</li><li>Taught basics of autonomy to high-school students using the speedobotix kit</li></ul>  | June 2016 - October 2017<br>Delhi, IND     |

## PUBLICATIONS

---

- Sidharth Talia** February 2020  
“A multimodal approach for localization of Ackermann steering micro ground vehicles in bad GPS reception environments” (Published in IEEE explore) [↗](#)
- Komal Bagai, **S. Talia**, S. Banerjee, N.K. Agarwal, H. Sharma May 2020  
“Operation of isolated DFIG with Modified PnO MPPT Algorithm” (Published in JoSDC) [↗](#)
- Abhijeet Bhattacharya, S. Banerjee, S. Girotra, H. Shukla, G. Bhardwaj, **S. Talia** June 2020  
“Simulation and Design of PI-Controller for the Control of Buck Converter” (Published in JoMSD) [↗](#)

## PROJECTS

---

- Contributions to the MuSHR project:** 2020 - 2021
- Multi-agent navigation system [↗](#)
  - Integration of the MuSHR car into the Donkey Simulator for reinforcement learning (Unity) [↗](#)
  - Leveraging Bezier curves for deep learning based autonomous navigation (Pytorch) [↗](#)
- Independent Projects:** 2017-2021
- Unified state control using quasi optimal trajectories [↗](#) . (Python, numpy)
  - low-cost inertial navigation system [↗](#) . (Embedded C++)
  - Low cost mini-self-driving car with robust state estimation and control. Blog 2 [↗](#) (Embedded C++)
  - Multi-rotor controller for orientation and altitude control [↗](#) (Embedded C++).
  - Internal combustion engine based model car for college competition purposes.
  - Deep learning based audio remix generator [↗](#) (Python, Tensorflow)
- Projects done with/for GGSIPU:** 2017- 2020
- Sinusoidal PWM generation from low cost microcontroller (Embedded C++)
  - Solid state control simulation and design for AC Machines (Embedded C++, MATLAB)
  - Deep learning based object detection (Python, Tensorflow).

## AWARDS AND RECOGNITIONS

---

|              |   |      |
|--------------|---|------|
| 2nd position | ML-Hacksprint, BVCoE Delhi - Deep learning for music remixing       | 2019 |
| 3rd position | Celestini Program India 2018 - ADAS coupled with V2V                | 2018 |
| 2nd position | BITS-Hyderabad ATMOS GP - Model I.C. Engine car race                | 2017 |
| 1st position | IIT-Kanpur Techkriti GP -Model I.C. Engine car race                 | 2017 |
| 3rd position | HBNIC (innovation challenge) 2017 - Micro autonomous ground vehicle | 2017 |

## SOCIETY MEMBERSHIPS

---

- IEEE Student Branch** 2018 - 2020  
*Head of MAKERS student interest group* Delhi, IND
- Conducted workshops for IEEE undergrad students on robotics, CAD.
  - Conducted a quad-copter building-and-tuning workshop for undergrad students.
- IET Student branch** 2016-2020  
*Student member* Delhi, IND
- Conducted workshops on embedded systems for first year engineering undergraduate students.