

SHIVAM VATS

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GITHUB: github.com/shivamvats

WORK EXPERIENCE

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| AUG-
MAY 2015 | Google Summer of Code Python Software Foundation
SymPy and SymEngine
Implemented a fast series expansion module for SymPy using a sparse data structure and faster algorithms. My project led to 20-1000 times speedup in expansions. I also designed the framework for SymEngine's series module. |
| PRESENT-
OCT 2014 | Open Source Contributor SymPy
Among top 30 contributors out of nearly 400
Worked on polynomials, series expansions, solvers, plotting and functions modules besides fixing a number of bugs |

PROJECTS

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| PRESENT -
FEB, 2013 | Autonomous Ground Vehicle
Implemented Extended Kalman Filter (EKF) based localisation for a mobile robot using ROS architecture and libraries. <ul style="list-style-type: none">- Helped build the gazebo model for a three-wheeled, front-wheel driven vehicle and integrated various sensor plugins with it.- Modified A* to write a lane-following local planner for a differential wheeled robot using Hough Transform on camera data. |
| APRIL -
FEB, 2015 | Resume Classifier
Developed an algorithm to match student resume with best suited companies by extracting key words and using a random forest classifier. |

EDUCATION

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| 2013-2018
(Expected) | B.Sc and M.Sc (Integrated Masters) in Mathematics and Computing
Indian Institute of Technology (IIT), Kharagpur
GPA: 8.14/10.00 |
| 2013 | Class 12th, Delhi Public School, R.K. Puram, New Delhi
CENTRAL BOARD OF SECONDARY EDUCATION (CBSE)
Cumulative Average: 95.8 % |

SCHOLARSHIPS AND ACHIEVEMENTS

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| 2013 | Awarded Innovation in Science Pursuit for Inspired Research Scholarship (INSPIRE)
DEPARTMENT OF SCIENCE AND TECHNOLOGY (DST), Government of India |
| 2013 | Awarded Merit Certificate in Physics
by CENTRAL BOARD OF SECONDARY EDUCATION (CBSE) for being in top 0.1 % of all Class 12 students across India. |
| 2014 | Represented IIT Kharagpur at 21st Annual Intelligent Ground Vehicle Competition (IGVC) , Oakland University, as a Freshman. |
| 2014 | Awarded Silver Medal
Inter-hall English Presidential debate |

TECHNICAL SKILLS

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| Proficient: | Python, C++, C, Robot Operating System(ROS), Git, Vim |
| Intermediate: | Gazebo, Java, TeX |