

Shivam Vats

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📄 <https://github.com/shivamvats>

Education

2013 **Class 12th, Central Board of Secondary Education (CBSE)** | Delhi Public School, R.K. Puram, New Delhi
Physics, Chemistry and Maths (PCM) with Computer Science - **95.8 %**

2013–2018 **Master of Science, Bachelor of Science** | Indian Institute of Technology, Kharagpur
Mathematics & Computing - **8.4/10 GPA**

Work Experience

- Oct 2014– **Open Source Contributor** | SymPy: A pure Python Compute Algebra System
Present Implemented hyperbolic functions `sech` and `csch` and fixed issues related evaluation of trigonometric functions. Worked on the plotting module which currently uses Matplotlib as its backend. Added the option to change color of the plot in its implicit plots.
- Dec 2014– **Open Source Contributor** | CSymPy: Fast symbolic manipulation library, written in C++
Present Fixed issues related to its `expand` function and improved its Python wrappers. Currently working to implement its series expansion module.
- Feb 2014– **Team Member** | AGV IIT KGP: Autonomous Ground Vehicle
Present AGV is a research group at IIT Kharagpur which works in the field of autonomous ground vehicles. It participates in Intelligent Ground Vehicle Competition(IGVC) 2014 held annually at Oakland University, Michigan. I was part of the team that went to the competition in 2014. We plan to participate again in 2015.

Skills & Expertise

Competent | C++, Python, C
Proficient | Git, Vim, ROS
Familiar | Java, Cython

Course Work

Mathematics | Linear Algebra, Transform Calculus, Numerical Techniques, Discrete Mathematics, Real Analysis, Partial Differential Equations, Probability and Statistics
Computer Science | Programming and Data Structures, Design and Analysis of Algorithms, Computational Number Theory