

# Abhijit Chowdhary

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<https://abhijit-c.github.io/>

## Education

- **New York University** New York, NY  
*B.A. Joint Mathematics and Computer Science (In Major GPA: 3.596)* Sep. 2016 - Present
  - Intending to do B.A./M.A. program at NYU to complete in 2020. This is why I'm applying to Master's in progress required positions.
  - Relevant undergraduate courses: Algorithms, Numerical Computation, Honors Analysis I/II, Honors Algebra I/II, Honors Linear Algebra, Honors Probability Theory, Topology.
  - Relevant graduate/PhD courses: Fundamental Algorithms, Numerical Methods I, Algebra, Partial Differential Equations
- **University of Maryland** College Park, MD  
*Visiting Student (GPA: 3.925)* Summer 2017-2018
  - Coursework: Complex analysis, Number theory, Partial Differential Equations, Introduction to Artificial Intelligence.

## Projects and Activities

- **First Robotics Team Member, Team 2849: Ursa Major** Columbia, MD  
*Hammond High School* Sep. 2012 - Present
  - A robotics team; every new year they gather for a challenge created by FIRST Robotics to build a robot in six weeks.
  - I worked as a build-team / programming-team flex member and team captain during my student years, and now I help as a programming and design mentor during their season.
  - Has managed to consistently reach elimination and championship rounds at the regional level.
  - See their github here: <https://github.com/teamursamajor>
- **Algebraic Point Set Surfaces Implementation**  
*Geometric Modeling (Grad)* Apr. 2018 - May. 2018
  - For a class final project, I implemented the theory in the paper *Algebraic Point Set Surfaces* by Gaël Guennebaud and Markus Gross from ETH Zurich.
  - The Paper presented an alternative method to take a point cloud to a triangularized mesh, and another method to estimate normals from a point cloud using algebraic fitting of a sphere.
  - Heavy use of the libraries Eigen, libigl, and nanoflann. Written in C++.
- **ffpoly**  
*Personal Project* Dec. 2018 - Present
  - After learning some algebraic number theory in my graduate algebra course, I decided to code an implementation of elements of the polynomial field  $\mathbb{F}_n[x]$ .
  - Still in the infancy stages of the project and learning some of the theory as I code.
  - Intention is to take it to the high performance computing course I'm taking Spring 2019 to optimize with parallel optimization.
  - You can see the project here: <https://github.com/abhijit-c/ffpoly>

- **Project Euler**

*Personal Hobby*

*2016 - Present*

- Participant in the Project Euler mathematical programming challenges.
- Have solved 60 problems (Top 3.8% as of Jan 2019)

## Skills

**Programming Languages:** C/C++,  $\text{\LaTeX}$ , Java, Python, Matlab, Octave, Bash.

**Languages:** English, Latin, Broken Hindi

**Operating Systems:** Linux (Arch Linux laptop, Debian desktop)

**Minor Mechanical Fabrication Skills**

**Miscellaneous:** strong verbal and written communication skills, excellent troubleshooting and debugging skills, exceptional problem solving skills, good teams skills

## Interests

**Academic:** Numerical Methods and Algorithms, Algebraic Number Theory, Computational Group Theory, High Performance Computing.

**Computers:** Have built and maintained my PC since 2012, and have modded my thinkpad X230 with various screen and hardware upgrades. Fulltime Linux enthusiast since 2012.

**Membership:** Student member of ACM and in the EBoard of the ACM Chapter of NYU.

**Sports:** Devoted Ravens (National Football League) fan.

**Other:** Have been semi-successfully getting into cooking.