

Soham Girish Tamba

Website: sohamtamba.github.io

Email: sgt287@nyu.edu

A) Education

1. **M.S., Computer Sc.** at *New York University*, Courant Institute of Mathematical Sciences.
8/2019 - Present
 - **Ongoing courses:** Computer Vision, Machine Learning, Programming Languages.
 2. **B.Tech, Computer Sc. & Eng.** at *National Institute of Technology Goa*.
8/2014 - 9/2018
 - **GPA:** 9.21/10.
 - **Selected courses:** Introduction to Machine Learning, Soft Computing, Applied Algorithms, Software Engineering, Database Systems, Mathematics-IV (Probability & Statistics).
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B) Research/Development Activity

1. **Google Summer of Code software developer** at *Julia Programming Language*.
5/2018 - 8/2018
 - Implemented high performance graph analysis algorithms in Julia.
 - Contributed 2,500 lines of code into the LightGraphs code base.
 - Routinely used Git for version control and merging code into the LightGraphs code base.
 - **Result published in Julia's blog:** <https://julialang.org/blog/2019/02/light-graphs>
 2. **Undergraduate thesis** at *National Institute of Technology Goa*.
8/2017 - 5/2018
 - **Topic:** Proxy Re-encryption (PRE) schemes.
 - Designed PRE for efficient access control in hierarchical group communication.
 - Formulated and designed Threshold Progressive PRE.
 - Produced 87 page report in Latex.
 3. **Research intern** at *Indian Institute of Technology Bombay*.
5/2017 - 7/2017
 - **Topic:** Approximation Algorithms for variants of Clustering Problem.
 - Collaborated with PhD students to design and analyse possible algorithms and heuristics.
 4. **Research assistant** to Prof. B. Sharat Chandra Varma at *National Institute of Technology Goa*.
5/2016 - 8/2016
 - **Topic:** Efficient FPGA implementation of Deep-Q Learning in VHDL.
 - Studied Deep Learning FPGA design & transferred it to Deep-Q Learning FPGA design.
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C) Programming Languages & Software Skills

- **Proficient:** Python, C++, Julia, Git, Latex.
 - **Intermediate:** Octave, Matlab, SQL, VHDL.
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D) Open source software development mentor

1. **Google Summer of Code mentor** at *Julia Programming Language*.
5/2019 - 9/2019
2. **Julia Seasons of Contributions mentor**
5/2019 - 9/2019
 - Advised student software developers on implementing their projects and reviewed their code

E) Conferences Attended

1. **Julia Conference 2018** at *University College London*.
8/2018
 - Conducted *Project Poster Presentation* on my *Google Summer of Code* project.
 - Received complete funding from Julia Project and NUMFocus.
 - **Blog post:** sohamtamba.github.io/GSoC/gsoc/2018/08/17/week-13.html
2. **Latest Advances in Machine Learning and Data Science 2017** at *NIT Goa*.
10/2017

F) Teaching assistantships

1. CS351: **Design and Analysis of Algorithms**, Spring 2018.
 2. CS303: **Theory of Computation**, Fall 2017.
 3. CS203: **Discrete Mathematics**, Fall 2017.
- Conducted recitation classes to clarify the concepts taught in class.
 - Assisted in the production of assignments.
 - Graded assignments.

G) Problem solving skills (Competitive programming)

1. Rank 1 in Codetron, 2018, organized by Goa Engineering College.
2. Rank 1 in Programmatics, 2018, organized by NIT Goa.
3. Rank 88 in **ACM** ICPC Asia Amritapuri Double Site Regional Contest, 2017.
4. Rank 13 in Inter-NIT Code-a-thon, 2017, organized by NIT Bhopal.
5. Rank 1 in Code Heat, 2016, organized by Manipal Institute of Technology.

Designed efficient algorithms to solve ad-oc problems and implemented them in C++.

H) Communication skills (Toastmasters)

1. Former member of NIT Goa's Toastmasters club.
8/2014 - 8/2016
2. Second place in NIT Goa Toastmasters Table Topics Contest (2015).
3. Third place in NIT Goa Toastmasters Evaluations Contest (2015).

Delivered speeches during club meetings every few weeks.
