

# Soham Girish Tamba

Personal Website: [sohamtamba.github.io](https://sohamtamba.github.io)

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## Education

1. **B.Tech, Computer Sc. & Eng.** at *National Institute of Technology Goa*.  
8/2014 - 9/2018
    - **GPA:** 9.21/10.
    - Graduated in *First Class with Distinction*.
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## Research/Development Activity

1. **Google Summer of Code** at *Julia Programming Language*.  
5/2018 - 8/2018
    - Student Software Developer for LightGraphs library.
    - Implemented optimized parallel graph algorithms in Julia.
    - Optimized pre-existing implementations in LightGraphs.
    - Contributed 2,500 lines of code into LightGraphs codebase.
    - **Supervisors:** Seth Bromberger & Divanyansh Srivastava.
    - Published results in **Julia 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.
    - **Supervisor:** Dr. Purushothama B. R.
  3. **Research Internship** at *Indian Institute of Technology Bombay*.  
5/2017 - 7/2017
    - **Topic:** Approximation Algorithms for variants of Clustering Problem.
    - Studied topics in Linear Optimisation, Approximation Algorithms, etc.
    - Collaborated with PhD students to design and analyse possible solutions.
    - **Supervisor:** Prof. Sundar Vishwanathan.
  4. **Research Project** at *National Institute of Technology Goa*.  
5/2016 - 8/2016
    - **Topic:** Efficient FPGA implementation of Deep-Q Learning.
    - Studied Deep Learning FPGA design & transferred it to Deep-Q Learning.
    - **Supervisor:** Dr. B. Sharat Chandra Varma.
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## **Teaching Assistantships (NIT Goa)**

1. **CS351: Design and Analysis of Algorithms**, Spring 2018  
1/2018 - 5/2018
  2. **CS303: Theory of Computation**, Fall 2017  
8/2017 - 12/2017
  3. **CS203: Discrete Mathematics**, Fall 2017  
8/2017 - 12/2017
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## **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](https://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
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## **Co-curricular activities**

1. **Competitive Programming**  
1/2016 - 3/2018
  - Rank 1 in Codetron, 2018, organized by Goa Engineering College during the technical festival, Spectrum.
  - Rank 1 in Programmatics, 2018, organized by National Institute of Technology Goa during the techno-cultural festival, Saavyas.
  - Rank 88 in ACM International Collegiate Programming Contest Asia Amritapuri Double Site Regional Contest, 2017.
  - Rank 13 in Inter-NIT Code-a-thon, 2017, organized by The Indian Society for Technical Education, NIT Bhopal chapter.
  - Rank 1 in Code Heat, 2016, organized by Manipal Institute of Technology's official computer science club, IECSE.

## 2. Online Courses

- Game Theory I by Stanford University & University of British Columbia, Coursera.  
**Score:** 98.9%
  - Machine Learning by Stanford University, Coursera.  
**Score:** 96.1%
  - Advanced Algorithms (Spring 2016) by MIT.
  - Design and Analysis of Algorithms (Spring 2015) by MIT OCW.
  - Probabilistic Systems Analysis and Applied Probability (Fall 2013) by MIT OCW.
  - Introduction to Algorithms (Fall 2011) by MIT OCW.
  - Mathematics for Computer Science (Fall 2010) by MIT OCW.
  - Introduction to Computer Science and Programming (Spring 2011) by MIT OCW.
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## Programming Languages

1. C++: Proficient
  2. Julia: Proficient
  3. Python: Proficient
  4. Octave: Intermediate
  5. VHDL: Intermediate
  6. SQL: Intermediate
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## Extra-curricular activities

### 1. Toastmasters (Public Speaking)

8/2014 - 8/2016

- Former member of NIT Goa's Toastmasters club.
- Second place in NIT Goa Toastmasters Table Topics Contest (2015).
- Third place in NIT Goa Toastmasters Evaluations Contest (2015).

### 2. Organizing Activities

- Head Organizer of Programmatics 2017.
  - Head Organizer of Programmatics 2016.
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