

Soham Girish Tamba

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A) Education

1. **Master of Sc. in Computer Sc.** at *New York University, Courant Institute of Mathematical Sciences.* *Sept 2019 – May 2021*
 - a. GPA: 4.000/4.000
 - b. Concentration: Deep Learning
 - c. Selected courses: *Deep Learning, Computer Vision, Deep Reinforcement Learning, Natural Language Processing with Representational Learning, Introduction to Deep Learning Systems.*
 2. **Bachelor of Tech. in Computer Sc. & Eng.** at *National Institute of Technology Goa.* *Aug 2014 – May 2018*
 - a. GPA: 9.21/10.00
 - b. Concentration: Optimization
 - c. Selected courses: *Applied Algorithms, Parallel Algorithms, Design and Analysis of Algorithms, Cryptography, Theory of Computation, Software Engineering, Object Oriented Programming.*
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B) Skills

1. Domain: *Deep Learning, Optimization, Software Engineering, High Performance Computing.*
 2. Programming Languages: *Python, C++, Julia, Java, JavaScript, SQL, CUDA.*
 3. Software Libraries: *Pytorch, Numpy, Pytorch Lightning, Tensorflow, Spring, React.*
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C) Professional Experience

1. Graduate Student Machine Learning Researcher at *New York University.* *June 2020 – Present*
 - a. Topics:
 - Architectural Energy Based Self-Supervised Learning through Video Frame Prediction.
 - Model-based Reinforcement Learning for Driving in Dense Traffic.
 - b. Supervisors:
 - *Yann Lecun*: Vice-President & Chief AI Scientist at Facebook, Professor at *NYU*.
 - *Alfredo Canziani*: Assistant Professor at *NYU*.
 - c. Tools used: *Pytorch, Pytorch Lightning, Pygame, Numpy.*
2. Software Development Engineer Intern at *Audible.* *June 2020 – Aug 2020*
 - a. Developed a web application using *Spring (Java)* and *React (JavaScript)*.
 - b. Significantly automated the monthly performance report of a department.
3. Software Development Mentor at *Google Summer of Code, 2019.* *May 2019 – Sept 2019*
4. Software Development Mentor at *Julia Seasons of Contributions, 2019.* *May 2019 – Sept 2019*
5. Student Software Developer at *Google Summer of Code, 2018.* *May 2018 – Aug 2018*
 - a. Implemented high performance graph analysis algorithms in Julia.
 - b. Presented the project at Julia Conference 2018, *University College London.*
 - Received *full funding* from Julia Programming Language and NUMFocus.
 - c. Results published in Julia's blog: www.julialang.org/blog/2019/02/light-graphs/
6. Research Intern at *Indian Institute of Technology Bombay.* *May 2017 – July 2017*
 - a. Topic: Approximation Algorithms for variants of the Clustering problem.
 - b. Collaborated with PhD students to design and analyse possible solutions.

D) Competitive Coding (Optimization)

1. Winner of Codetron 2018, organized by Goa Engineering College.
2. Winner of Programmatics 2018, organized by National Institute of Technology Goa.
3. Honorable Mention (rank 88) in ACM ICPC Asia Amritapuri Double Site Regional Contest, 2017.
4. Winner of Code Heat, 2016, organized by Manipal Institute of Technology.

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

E) Selected Online Courses

1. *Game Theory I* by Stanford University & University of British Columbia, Coursera.
Grade: 98.9%
2. *Machine Learning* by Stanford University, Coursera.
Grade: 96.1%
3. Matrix Methods in Data Analysis, Signal Processing, and Machine Learning (Spring 2018) by MIT OCW.
4. Convolutional Neural Networks for Visual Recognition (Winter 2016) by Stanford.
5. *Design and Analysis of Algorithms* (Spring 2015) by MIT OCW.

F) Teaching Assistantships at NIT Goa

1. CS351: *Design and Analysis of Algorithms*, Spring 2018.
2. CS303: *Theory of Computation*, Fall 2017.
3. CS203: *Discrete Mathematics*, Fall 2017.

G) Public speaking (Toastmasters)

Aug 2014 – Aug 2016

1. Former member of NIT Goa's Toastmasters club.
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.

H) Organizing activities

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

Programmatics is an annual competitive coding event organized by NIT Goa.

Approximate participant size: 30.
