

# Sidhant Nagpal

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## SKILLS

Deep Learning • Algorithms • AI/ML  
Applied Mathematics • Open Source

## LANGUAGES

C • C++ • Python • Java • SQL  
Bash • Go • LaTeX • HTML • CSS

## LIBRARIES

PyTorch • Keras (TensorFlow) • NumPy  
scikit-learn • Jupyter • Matplotlib  
Google Colab • Selenium • Flask

## TOOLS

Git • Travis CI • AWS SQS • Postman  
Matlab/Octave • DialogFlow • Splunk

## EDUCATION

### UNIVERSITY OF DELHI

#### BE IN COMPUTER SCIENCE

2015-19 (expected) | Delhi, India  
Netaji Subhas Institute of Technology  
Percentage: 82.16% (upto 6 sems)

### BAL BHARATI PUBLIC SCHOOL

Grad. May 2015 | Pitampura, Delhi  
AISSE (Class XII): 96%  
AISSE (Class X): Cum. GPA 10.0/10.0

## PROJECTS

- **Deep Learning for CV**  
GANs, Image Denoising (Residual Learning), Style Transfer, Transfer Learning using CNNs
- **Deep Learning for NLP**  
Text Classification using FastText (bag of tricks) model, Sentiment Analysis using GloVe and LSTM model, Language Model using GRU
- **Game Playing AIs**  
Intelligent solvers for N-Puzzle, N-Queens, Tic-Tac-Toe, Sudoku, TSP using Search & Optimization techniques: Heuristic Search, Minimax, Hill Climbing, Simulated Annealing
- **Formal Language & Automata**  
Implemented Finite, Push-Down Automata, Turing Machine for Formal Languages
- **GitHub Mini-Projects (Python)**  
Web App (Flask) for real-time ranking based on Elo rating and Web Scraper (Selenium) for tracking progress on Programming Judges

## LINKS

Github:// [SidhantNagpal](#)  
LinkedIn:// [SidhantNagpal](#)

## EXPERIENCE

### GOOGLE SUMMER OF CODE | DEVELOPER FOR SYMPY

Feb 2018 - Aug 2018 | Remote *Mentor: Prof. Kalevi Suominen (University of Helsinki)*

- Implemented **discrete transforms, convolutions, recurrences** modules using efficient algorithms and paradigms (Dynamic Programming, Divide and Conquer) for **SymPy**, a **NumFOCUS** sponsored Python library for Symbolic Mathematics
- Contributed to SymPy modules for matrices, differential equations, solvers, combinatorial functions, SymPy bot (based on GitHub API) and Sphinx docs

### INTUIT | SOFTWARE ENGINEERING INTERN

May 2018 - Jul 2018 | Bangalore, India

*Manager: Karthik Krishna*

- Incorporated encryption logic and distributed message queue to decouple the monolith - **IntuitMarket.com** (QuickBooks e-commerce) for AWS migration
- Contributed to Intuit Data Protection Services (IDPS) SDK for Cryptography
- Hackathon runner-up for implementing IoT & AI-based solutions for **Intuit Mint** to automate expense tracking using NFC trigger and Google Assistant

### INDIAN INSTITUTE OF TECHNOLOGY | RESEARCH INTERN

Jun 2017 - Jul 2017 | Kanpur, India *Supervisor: Prof. Raghunath Tewari (IIT Kanpur)*

Worked on the Dynamic DFS problem in Graph Theory and presented an efficient algorithm based on Heavy-Light Decomposition from the paper [arXiv:1502.02481v3](#)

## POSITIONS OF RESPONSIBILITY

- **Project Collaborator, SymPy** Active contributor and Pull Request reviewer
- **Mentor, Google Code-in** Mentored students for Open Source under SCoRe lab
- **Delegate, PyCon India** Organised and conducted a developer sprint for SymPy
- **Volunteer, Intuit** Created tactile stories for blind children (We Care & Give Back)
- **Volunteer, WARUDA NGO** Created awareness about computer literacy

## PROGRAMMING EVENTS

2018	Rank 464/24K+	<b>Google Code Jam Round 3 (semi-final)</b>
2017	Rank 1668/25K+	<b>Google Code Jam Round 2 (quarter-final)</b>
2017	Rank 105/1K+	<b>Google Kickstart Round G</b>
2017	Rank 60/800+	<b>Google Kickstart Round B</b>
2017	Rank 26/250+	<b>ACM-ICPC Asia Regionals, Amritapuri</b>
2017	Rank 41/100+	<b>ACM-ICPC Asia Regionals, Gwalior</b>
2016-18	Top 200/300K+	<b>Sphere Online Judge (SPOJ)</b>
2015-18	Solved 1000+ problems	Programming Judges (Codeforces, SPOJ, etc)

## ACHIEVEMENTS

2016-17	Merit Scholarship	Dean's Merit List, Computer Eng. Dept.
2016	Ramanujan Award	Math courses, Computer Eng. Dept.
2015	99.81%tile among 1.3M+	Joint Entrance Examination (JEE) Main
2015	Fellowship Award	Kishore Vaigyanik Protsahan Yojana (KVPY)
2014	Top 1.33% among 3L+	National Talent Search Examination (NTSE)
2013	Best Player & Team Captain	Inter-School Hockey Tournament
2011	Bronze Medallist	Inter-Zonal Hockey Tournament
2010	IOM Silver Medallist	International Olympiad of Mathematics
2010	IMMO Silver Medallist	International Master Mathematics Olympiad
2008-15	Scholar Platinum Medal	Academic excellence for 8 years, High School