

# Sidhant Nagpal

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## SKILLS

### TECHNICAL

Algorithms • Data Structures • APIs  
Artificial Intelligence • Open Source  
Applied Mathematics • Cryptography

### PROGRAMMING

Python • C++ • C • Shell • LaTeX  
SQL • Java • Android • HTML • CSS  
Git • Travis CI • AWS SQS • DialogFlow  
Flask • Selenium • BeautifulSoup  
Matlab • Octave • SIMD • Assembly

## EDUCATION

### UNIVERSITY OF DELHI

#### BE IN COMPUTER SCIENCE

2015-19 (expected) | Delhi, India  
Netaji Subhas Institute of Technology  
Percentage: 82.16% (Top 5%)

### BAL BHARATI PUBLIC SCHOOL

Grad. May 2015 | Delhi, India  
AISSCE (Class XII): 96%  
AISSE (Class X): CGPA 10.0/10.0

## PROJECTS

- **SymPy**  
Python library for Symbolic Mathematics
- **Intuit Mint - Assist (Hackathon)**  
Expense tracking automation using Google Assistant (AI) and NFC Trigger (IoT)
- **Game Playing AIs**  
Intelligent systems for solving N-Puzzle, N-Queens, Tic-Tac-Toe using AI Techniques
- **Ranking Application**  
Python (Flask) Web App based on Elo rating
- **Breakout (Android)**  
Android game based on DX-ball
- **Algorithmic Progress Visualizer**  
Web scraper and visualizer for tracking algorithmic progress on Online Judges

## LINKS

Github:// [SidhantNagpal](#)  
LinkedIn:// [SidhantNagpal](#)  
Twitter:// [@\\_SidhantNagpal](#)

## EXTRA CURRICULARS

Bronze Medallist, Hockey Inter-Zonals  
Bronze Medallist, Hockey Zonals  
Best Player & Team Captain, Inter-School

## EXPERIENCE

### GOOGLE SUMMER OF CODE | DEVELOPER FOR SYMPY

Apr 2018 - Aug 2018 | Remote

- 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 bot (based on GitHub API) and Sphinx documentation

### INTUIT | SOFTWARE ENGINEERING INTERN

May 2018 - Jul 2018 | Bangalore, India

- Implemented encryption logic and distributed message queue to decouple the **IntuitMarket.com** (QuickBooks E-commerce) monolith 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**

## RESEARCH

### INDIAN INSTITUTE OF TECHNOLOGY | UNDERGRAD RESEARCHER

Jun 2017 - Jul 2017 | Kanpur, India

Studied the Dynamic Depth First Search problem in Graph Theory and presented an efficient algorithm based on the research paper [arXiv:1502.02481v3](#) by IIT Kanpur

## POSITIONS OF RESPONSIBILITY

**Google Code-in:** Mentor for Sustainable Computing Research (SCoRe)

**PyCon India (PSF):** Technical speaker for Symbolic Computation using SymPy

**SymPy (NumFOCUS):** Project collaborator responsible for reviewing Pull Requests

**We Care & Give Back (Intuit):** Volunteer for creating tactile stories in Braille

**WARUDA (NGO):** Volunteer for creating 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	Online Judges for Programming

## ACHIEVEMENTS

2016-17	Merit Scholarship Award	Academic courses, University
2016	Ramanujan Award	Mathematics courses, University
2016	Section Rank 1/70	Computer Science courses, University
2015	99.81 percentile from 1.3L+	Joint Entrance Examination (JEE) Main
2015	Fellowship Award	Kishore Vaigyanik Protsahan Yojana (KVPY)
2014	Top 1.33% of 3L+	National Talent Search Examination (NTSE)
2014-15	Merit Scholarship Award	Science courses, High School
2008-15	Scholar Platinum Medal	Academic courses, High School
2011	Gold Medallist	English courses, High School
2010	IOM Silver Medallist	International Olympiad of Mathematics
2010	IMMO Silver Medallist	International Master Mathematics Olympiad