Sidhant Bansal

http://sidhantbansal.com | sidhbansal@gmail.com

EDUCATION

STANFORD UNIVERSITY
MS in Computer Science
Expected Grad. 2025 | GPA: 4+/4.0
Theory Track

NATIONAL UNIVERSITY OF SINGAPORE
BComp in Computer Science
2017 - 2021 | GPA: 4.8/5.0
Turing Programme
Minor in Mathematics

COURSEWORK

Design and Analysis of Algorithms
Randomized Algorithms
Advanced Algorithms
Machine Learning
NLP with Deep Learning
Computer Networks
Operating System
Quantum Computing
Convex Optimization
Statistics
Advanced Linear Algebra
Game Theory
Ongoing Courses

TA

Modern Algorithmic Toolbox†
Parallel & Distributed Algorithms*
Design & Analysis of Algorithms*
Data Structures & Algorithms*
† At Stanford
∗ At NUS

SKILLS

Programming Languages
Experienced:
•Modern C++ •Python •Ocaml
Familiar:
•Java •SQL •Solidity
•Javascript •Q
Tools and Frameworks:
•Numpy •Pandas •Scikit-learn
•Kafka •Git •Vim •Bash

LINKS

LinkedIn:// **sidhant-bansal**
Github:// **sidhant007**
DevPost:// **Sidhant**
Codeforces:// **sidhant**

EXPERIENCES

TOWER RESEARCH CAPITAL | Quant Trading Intern
June 2024 - August 2024 | New York City
- Improved alpha in a medium frequency setting by 11% through novel modelling techniques, feature engineering and leveraging information about market conditions.
- Researched new neural net based architectures suited specifically for our trading setting and low signal-to-noise ratio environment.

CITADEL SECURITIES | Dev Full Time
August 2021 - June 2023 | London, New York City
- Designed a new real-time reconciliation service in **C++** to process 100M+ orders daily. Implemented aggressive parallelization techniques with lock-less data structures to maximize throughput.
- As part of options team, implemented the end-to-end pipeline for (i) absorbing speculated corporate actions from external third party sources, (ii) normalizing them and (iii) feeding them into trading strategies.

DRW | Dev Intern
May 2020 - August 2020 | Singapore
- Developed tooling to compress market data received from the exchange.
- Engineered the command line feature **conda compare** in the open-source environment manager **Conda**, to enhance the daily workflow of researchers.

JANE STREET CAPITAL | Dev Intern
May 2019 - August 2019 | Hong Kong
- Contributed to multiple projects in post trade and trading system teams.
- Worked extensively with **Ocaml**, a functional programming language.

RESEARCH

ALGORITHMIC MARKET DESIGN | Stanford Impact Lab
March 2024 - Present | Prof. Itai Ashlagi and Prof. Irene Lo
- Improved the existing multinomial-logit models (via feature engineering) to forecast student preferences for public school allocation in San Francisco.
- Simulated varying policy designs with trade-offs across metrics for distance, choice and diversity, and presented findings to SFUSD.

1-BIT COMPRESSED SENSING | NUS Final Year Thesis
April 2020 - Jan 2022 | Prof Arnab Bhattacharya
- Established a lower bound (tight up to logarithmic factor) for **1-bit compressed sensing** in a specific setting.
- Published findings in **IEEE ISIT 2022**
- Explanatory slides at **sidhantbansal.com/nusfyp.pdf**

ACHIEVEMENTS

Year		Achievement
2020	22	ACM-ICPC World Finalist (Invitational)
2019	Top 5%	Dean's List for Fall'19
2019	1ST	ACM-ICPC Kaula Lumpur Regional Contest
2019	62ND	ACM-ICPC World Finalist
2018	1ST	ACM-ICPC Yangon Regional Contest
2017	Bronze	International Olympiad in Informatics (IOI)