Arham Chopra

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MS in CS Student, CMU | Institute Rank 6, IIM Ahmedabad | Ex-Tower Research Capital | IIT Kanpur CS

Education

Degree	Institution	GPA	Date
Master of Science in Computer Science	Carnegie Mellon University (CMU)	**4.00/4.00**	Dec 2023
Master of Business Administration (PGP)	Indian Institute of Management Ahmedabad (IIMA)	**3.612/4.33**	May 2022
Bachelor of Technology in Computer Science	Indian Institute of Technology Kanpur (IITK)	**9.7/10.0**	May 2018

Academic Achievements

IIMA	● Recipient of **1970 Batch Merit Industry** scholarship & **IIMA Merit Industry** scholarship totalling **$3700**	2022
	● Obtained **cumulative rank 6th/387** (98.45%ile) in second year and **rank 4th/387** (98.45%ile) in first year	2022
	● Ranked **1st** in **5/45** (11.1%) courses	In **top 5** in **8/45** (17.8%) courses	In **top 10** in **15/45** (33.3%) courses	2022
IIT Kanpur	● Obtained **10/10 GPA** in **4/8** semesters	**10/10 grade** in **20/22** (90.91%) core courses & in **39/45** courses	2018
	● Awarded the **Certificate of Merit** for Academic Excellence (within top 10%ile) for **2 consecutive years**	2017

Professional Experience   (24 Months)

Tower Research Capital India Pvt Ltd (TRC) – Software Developer   Gurgaon, India - (July 2018 - July 2020)

Projects		
P&L Framework	● Achieved **300% increase** in **speed** and **50% decrease** in **memory** usage by redesigning the **P&L infrastructure**	
	● Increased **adoption** by **3x** by integrating multiple user features for **monitoring real-time** P&L in existing markets	
	● Improved trading prospects for **10/20 strategists** through enhanced monitoring of real-time and historical P&L	
Strategy Framework	● Pioneered easy-to-use strategy framework providing **dynamic deployment of strategies** using runtime trader inputs	
	● Optimized dynamic object creation to reach **80% performance** match to older framework for order sending latency	
	● Reduced **simulation cycle time** by **25%** & **maintenance costs** of running strategies by **20%** via new framework	
Verification Tool	● Improved accuracy of book-building process by incorporating multiple feeds into the testing framework for CME	
	● Discovered & resolved **critical** bugs in book building by evaluating market data with the enhanced framework	
Cautious Times	● Realized **10% performance gain** in detecting highly volatile events by redesigning entire framework in Python	
	● Achieved **20% accuracy improvement** by pre-processing complete events data & removing earlier inefficiencies	
Responsibility	● Ownership of **global P&L infrastructure** (30+ exchanges), spearheading performance and accuracy projects	
	● Overlooked market summary reconciliation by the **post-trade** team, and maintained the historical P&L database	
Appreciation	● **1/38** promoted to a **trading team** (NorthMoore) within **3 months** of joining core engineering department	

Nutanix – Software Developer Intern   Bengaluru, India - (May 2017 - July 2017)

Kafka Library	● Introduced an automated benchmarking framework for Apache Kafka to track CPU, memory & throughput metrics
	● Developed a library for internal services to be able to fully manage & communicate with the Kafka cluster in Python
	● Utilized WebSocket protocol to provide support for securely reading data from Kafka cluster for external client

Other internships: (Consulting) BCG – Summer Associate (May 2021 - July 2021), (Start-up) Elanic – Software Intern (May 2016 - July 2016)

Academic Projects

SCADA Security	● Designed **plug & play** module to encrypt external SCADA communication & minimize performance impact	2018
RailQuery	● Developed a railway inquiry system using ANNE stack with **20% improvement** in **efficiency** over IRCTC	2017
NachOS	● Implemented system calls, process/thread scheduling, memory management and page replacement policies	2016

Other projects: Stock market prediction, Meetup scheduler, Voice command recognition, Almost-c-compiler, Breaking zoobar security

Skills

Languages	Intermediate: C++, C, Python2/3, Bash	Basic: Go, Haskell, Node.js

Relevant Coursework

Ongoing	Distributed Systems	Storage Systems	Computer Architecture	Algorithms in Big Data
Completed	Computer Security Systems	Computer Networks	Randomized Algorithms	Functional Programming

Extracurriculars Activities

Web Comm. Head TRBS, IIMA	● Led a team of students to manage **10+ stakeholders** achieving **50K+ footfall & 2.7M+ visibility** on website	2021
	● **Pioneered** design with **runtime** control of **80%** of content & **9x improved** speed in launching new events	2021
	● Realized **40% performance boost** & **80% maintenance cost savings** by adding full content customization	2021
Business Comp.	● **Winner: 3rd/96** teams in Global Graduate Business Challenge	**2nd** in Hospitality Hiatus by IIM Bangalore	2021
ACM-ICPC	● **Ranked 30th/2.4K+ (Top 1.5%ile)** in the ACM-ICPC Preliminary Qualifiers & **institute rank 2nd** in IITK	2017