

# KUNAL JOSHI

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## EDUCATION

### New York University - Courant Institute of Mathematical Sciences

Sep 2021 – May 2023

Master of Science in Computer Science; GPA: 3.7/4.0.

New York, NY

- Coursework: Big Data ML Systems, Distributed Systems, Cryptocurrencies, Applied Cryptography, Systematic Trading
- Teaching Assistant for Applied Cryptography (Spring '22)

### Manipal Institute of Technology

Sep 2016 – July 2020

Bachelor of Technology in Computer Science; Minor in Computational Mathematics; GPA: 8.7/10.0.

Manipal, India

- Received the Manipal Merit-and-Means scholarship - awarded to top performers in the University Entrance test.
- Coursework: Data Structures, Algorithms, Networks, Parallel Computing, Distributed Systems, Linear Algebra, Time Series Analysis

## EXPERIENCE

### Walmart Global Tech

May 2022 – Aug 2022

Software Engineer III Intern

Sunnyvale, CA

- Built a full-stack service to add a feedback feature to the Walmart GoLocal client website using Java SpringBoot, Node.js and React.
- Created a Kibana dashboard using Elasticsearch to consume feedback data and provide analytics.

### National Instruments

July 2020 – June 2021

Software Engineer

Bangalore, India

- Fixed multiple bugs and added features in LabVIEW modules and tool-kits for Control Design, Simulation, Mathscript, VI Analyzer, Digital Signal Processing.
- Created internal tooling which allowed for auto setup of VMs using Python. Used across multiple team for automated tasks across org. It brought time savings of over 100 daily developer hours.
- Owned migration of teams Build and Test pipelines from internal tools to Azure DevOps. Successfully completed migration pre-2021 release schedule and reduced pipeline time by over 50%.
- Responsible for mentoring 2 summer interns and participated in intern recruitment efforts.

### Samsung Research Institute

Jan 2020 – June 2020

Software Intern

Bangalore, India

- Involved in development of MAC protocol for 5G (mmWave) SmallCell over the Qualcomm FSM100XX platform.
- Worked on C-based framework for testing various features of the MAC scheduler.
- Successfully overhauled the Unit Test framework from the Macro Cell project to SmallCell team requirements.

### praktice.ai

May 2019 – July 2019

Software Intern

Bangalore, India

- Automated the creation and delivery of weekly reports to multiple clients using AWS Lambda, S3, RDS, DynamoDB and Google Charts API. This saved over 20 hours of weekly developer time. Service also generated on-demand reports.
- Added features to the existing AI chat-bot which would allow medical professionals to take over. Became a major selling point of the service.
- Worked on automation of various data collection tasks using Selenium and BeautifulSoup and fixed bugs in the main product utilizing AWS Cloudwatch.

## SKILLS

**Programming:** Python, C, C++, Java, Javascript, Scala, Elixir, Node.js, React, SQL, LabVIEW, Solidity

**Technologies:** AWS (Lambda, S3, RDS, DynamoDB), CI/CD Pipelines, Hadoop, Spark, Hive, Kafka, Bash, Git, Postman

## PROJECTS & RESEARCH

### Practical Byzantine Fault Tolerance in Elixir 🔊 | Elixir, Erlang

2022

- Implemented the PBFT consensus algorithm in a partially synchronous network simulation.

### Cross-Domain Shopping, Stock Trend and Consumer Review Analysis 🌐 | Hadoop, Hive, Spark, Java, Python, SQL, Tableau

2022

- Analyzed relationships between stock prices, stock news, and users' e-commerce behavior.
- Used Big Data tools to study review distribution over time and examine patterns between attributes such as upvotes, creation time, and sentiment.

### Hashing using Parallel Programming 🔊 | CUDA, OpenMPI, C

2019

- Implemented a hash tree algorithm based on Merkle trees.
- Parallelization attempted to reduce processing time when hashing large data files.