

# Amaan Marfatia

☎ 404.573.2478  
✉ AmaanMarfatia@gmail.com  
🌐 linkedin.com/in/AmaanM  
🐙 github.com/CloudyDino

## EDUCATION

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### Georgia Institute of Technology

*Candidate for B.S in Computer Science and Mathematics*

**Atlanta, GA**

*Aug. 2017 – May 2021*

GPA: 4.0

- Concentrations: Information/Internetworks, Systems and Architecture
- Extracurriculars: Programming Team, Math Club, Chess Club
- Key Classes: Data Structures and Algorithms, System and Networks, Design and Analysis of Algorithms, Advanced Operating Systems, Computer Networking, Information Security, Processor Design

## EXPERIENCE

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### Georgia Institute of Technology

*Student Research Assistant*

**Atlanta, GA**

*Aug 2020 – Present*

- Worked with professors and mentors to conduct research in accelerating sparse problems.
- Used Vivado HLS and FPGAs to hardware accelerate sparse matrix-vector multiplication with systolic tree structures.
- Submitted “Maia: Matrix Inversion Acceleration Near Memory” paper to DAC 2021.
- Added SpMV acceleration to RISC-V using a Rocket Custom Coprocessor with Chipyard and Verilator.

### Amazon

*Software Development Engineer*

**Seattle, WA**

*May 2020 – Aug. 2020*

- Worked on the X-Ray CloudWatch team and used Java and XML.
- Created an internal service to export X-Ray distributed tracing data in the New Relic format.
- Used AWS DynamoDB, S3, CodeDeploy, and EC2 to run and deploy the service.

### Match Group, INC

*Full Stack Software Engineer*

**Dallas, TX**

*Jan. 2019 – May 2019, Aug. 2019 – Apr. 2020*

- Worked on the Plus1 Labs team to create Ship, an Android dating app with over 100,000 installs, from the ground up.
- Formed reactive screens and UI using Kotlin, XML, SQL, and Android architecture components.
- Created and communicated with API using Ruby, Room database, Retrofit, and Moshi.
- Developed a CI/CD pipeline using Jenkins that can push builds to the Play Store, make build notes, and inform the team of failing builds, linting issues, and code coverage drops using Jacoco.

### Bank of America

*Technology Summer Analyst*

**Jersey City, NJ**

*Jun. 2019 – Aug. 2019*

- Worked with the Independent Price Verification team to analyze and aggregate data from stock traders.
- Modernized Python files to transition the whole project from using Python 2.7 to 3.7.
- Updated and fixed over 750 failing unit tests to run in memory and in parallel.

### The Rainmaker Group Ventures, LLC

*Technical Associate Intern*

**Alpharetta, GA**

*Jun. 2018 – Aug. 2018*

- Worked on the GuestRev software, a revenue management system for hotels, casinos, and resorts, using the ASP.NET MVC framework, SQL, and JavaScript.
- Learned C# and SQL to add a user preferences table to the database and format dates using the server-side user preferences and HTML5 local storage.

## PROJECTS

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### Chess Repertoire

*Website to make chess repertoires (chess-repertoire.web.app)*

- Created a website for users to study and make chess opening repertoires using ReactJS on Firebase.

## SKILLS / LANGUAGES

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Programming Languages: Java, Kotlin, C, C++, Python, SQL, Dart, JavaScript, TypeScript

Technologies: AWS, Android, Web Development, Git, GitHub, Jira, Jenkins, Flutter, Firebase, Electron, React