

# Akib Nizam

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## Education

### Georgia Institute of Technology

B.S. IN COMPUTER SCIENCE

Atlanta, Georgia

Aug 2016 - May 2020

- GPA - 3.5/4.0
- Concentration - Computer Architecture and Information Inter-networks
- Relevant Coursework: OS Design, Advanced OS Design, Algorithm Design, Legal Aspects of Business, Management Statistics

## Experience

### Bank of America Merrill Lynch

New York City, New York

SOFTWARE ENGINEERING INTERN

May 2019 - Aug 2019

- Tested and implemented mathematical models for Merrill's trading platform in C++ for evaluating the intra-day credit, risk, profit/loss of Municipal Bonds – this feature is used by over 2000 traders to manage assets worth over \$300,000,000
- Developed Python unit tests to check for proper installation of SOFR (Secured Overnight Financing Rate) for intraday risk and profit/loss calculations
- Built online database in JavaScript, NodeJS and SQL to store and view information on real estate development bonds issued by BAML

### Qbitlogic

Atlanta, Georgia

SOFTWARE ENGINEERING INTERN

May 2018 - Aug 2018

- Built a stack-based buffer-overflow checker in Python for C++ programs with 3% false positive rate using binary analysis techniques
- Caught security vulnerabilities in open source projects using the buffer-overflow checker
- Collected data on performance of different static analyzers and designed improvements for the analyzers based on the data

### Aware Home Research Initiative

Atlanta, Georgia

UNDERGRADUATE RESEARCHER FOR GEORGIA TECH LABS

May 2017 - Aug 2017

- Built a data management web application in NodeJS and NoSQL to collect data from smart home appliances in real time
- Built a smart watch application in JavaScript, HTML, CSS and Tizen for senior citizens to notify on safety hazards

## Personal Projects

### Almond — [almond.epizy.com](http://almond.epizy.com)

STOCK OPTION CHAIN ANALYZER

Aug 2019 - Present

- Built a personal option chain viewer and analyzer of US stocks by creating RESTful APIs in JavaScript, PHP, CSS/HTML
- Implemented some contrarian sentiment indicators to find possible supports and resistances of price action of stocks
- More reliable and user-friendly than other public option chain viewers

### Angr — [github.com/angr/angr](https://github.com/angr/angr)

BINARY ANALYSIS TOOL - WITH OVER 3000 ACTIVE USERS

May 2017 - Aug 2017

- Increased speed and efficiency of the search algorithm, written in Python, that is used in symbolic execution
- Fixed bug in Python code that gave rise to path explosion problem, which is a common and important problem with symbolic execution

### Batman Vs. Joker — [github.com/akibnizam/Batman-Vs-Joker-Game-GBA-](https://github.com/akibnizam/Batman-Vs-Joker-Game-GBA-)

NINTENDO GAMEBOY ADVANCED GAME

Nov 2017 - Dec 2017

- Build a game in C where players play as Batman and have to catch Joker while dodging flying projectiles
- The game was named "Top 3" best game of Fall 2017 class of CS 2110 (Computer Organization and Programming)

## Skills

**Languages/Frameworks** C++, JavaScript/jQuery, HTML/CSS, PHP

**Other Technologies** AngularJS, NodeJS, Ionic, Linux, Git, Bulma CSS, SQL

## Extracurricular Activities

**Bangladesh Student Association** Provide help with event organization to represent Bangladesh on campus

**Caving/Outdoors Club** Avid caver and currently training to be an instructor for caving trips at Georgia Tech

**Billiards** Have been training and playing local leagues to become professional pool player