

# Osama Esmail

osamabinesmail@gmail.com | (847) 834-1796 | 410 E Green St, Apt #514 Champaign, IL 61820

**GitHub:** /osaesm | **LinkedIn:** /in/osamabinesmail | **Website:** osamaesmail.me

## EDUCATION

University of Illinois at Urbana-Champaign

Expected Graduation 05/2021

GPA: 3.33

- BS in Computer Science
- BS in Mathematics

## EXPERIENCE

### IMC Trading

06/2020 - 08/2020

*Quantitative Trading Intern*

- Performed analysis on block trading strategies

### Amazon

05/2019 - 08/2019

*Software Development Engineering Intern*

- Contributed to internal subscriptions API written with Spring Java Framework
- Displayed API contributions in internal tool written in AngularJS

### Illinois Geometry Lab

01/2019 - 05/2019

*Undergraduate Researcher*

- Analyzing Champaign County health inspection data to streamline future inspections
- Collaborating to create a machine learning model for the data using TensorFlow

### Illinois Rocstar

05/2018 - 08/2018

*Software Engineering Intern*

- Developed product website front-end using ReactJS, creating new components and overhauling various aspects of the front-end
- Debugged and updated Python Flask back-end, including modifying models, working with NoSQL, and adding new features to be implemented on the front-end

## PROJECTS

### Crypto Trader

- Implemented Coinbase Pro's API into a simple crypto trading bot

### Optimal Rubik's Cube Solver

- Threaded processes asynchronously in C++ to speed up a Rubik's Cube solver
- Used CUDA to further parallelize the solver

### Schedule Optimizer

- Deployed a ReactJS website (NodeJS backend) with 4 group members for making conflict-free schedules at our university.

### CS:GOtcha

- Developed fully functional first-person shooter over Spring 2017 with a friend using Unity3D and various C# & JavaScript scripts.

## RELEVANT COURSEWORK

**Computer Science:** Database Systems, Applied Cryptography, Algorithms, Programming Languages and Compilers, Intro to Algorithms, Applied Parallel Programming, Systems Programming, Computer Architecture, Numerical Methods, Statistics and Probability, Discrete Structures, Data Structures, Applied Linear Algebra, Intro to Computer Science

**Mathematics:** Abstract Algebra (Honors), Complex Variables (Honors), Elementary Number Theory, Abstract Linear Algebra (Honors), Real Analysis (Honors), Fundamental Mathematics (Honors), Differential Equations (Honors)

## SKILLS AND INVOLVEMENT

**Computer Languages:** Python, JavaScript, C++, Java, HTML/CSS3, C#

**Frameworks, Libraries and Technologies:** TensorFlow, PyTorch, NumPy, Pandas, CUDA, ReactJS, Flask, Git

**Student Organizations:** SIG AI (Artificial Intelligence), Math Contests Group, Starcourse (Concert group)

**Interests:** Chicago Bulls, Chicago White Sox, Green Bay Packers, Trivia, Cooking Shows, Futurama