

# Osama Esmail

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## EDUCATION

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University of Illinois at Urbana-Champaign

- BS in Computer Science
- BS in Mathematics

05/2021

## EXPERIENCE

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### InnoPeak Technology

07/2021 - Present

*Software Development Engineer*

- Implemented real-time image analysis & object detection algorithms for C++ & Android applications
- Designed and implemented Android AR applications in Unity3D with C#

### IMC Trading

06/2020 - 08/2020

*Quantitative Trading Intern*

- Analyzed and simulated block trading strategies and their profits in JupyterLab with Python

### Amazon

05/2019 - 08/2019

*Software Development Engineering Intern*

- Contributed to internal subscriptions API written with Spring Java Framework
- Deployed 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

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### Sports Betting Bot

- Scraped 538 APIs for calculating win probabilities and expected values of bets in American sports
- Developed a custom heuristic accounting for 538's biases & had 10000% quarterly profit

### Crypto Trader

- Deployed a cryptocurrency trading bot written in Python with Coinbase Pro's API to Heroku

### 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

### CS:GOtcha

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

## SKILLS AND INTERESTS

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

**Frameworks, Libraries and Technologies:** D3, ReactJS, Flask, Node, Spring, TensorFlow, PyTorch, NumPy, Pandas, CUDA, Git

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