

# Muhammad "Osama" Sakhi

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## EDUCATION

### Georgia Institute of Technology

Atlanta, GA

- **Expected Graduation:** December 2019
- **Degree:** Master of Science in Computational Science & Engineering

### Georgia Institute of Technology

Atlanta, GA

- **Graduation:** May 2017
- **Degree:** Bachelor of Science in Computer Science
- **Concentrations:** Intelligence and Devices
- **GPA:** 3.86
- **Awards/Honors:** Dean's List, Faculty Honors, Asian and Pacific Islander Scholarship
- **Coursework:** Machine Learning, Natural Language Processing, Introduction to Artificial Intelligence, Design and Analysis of Algorithms, Applied Combinatorics, Robotics and Perception, Computer Networking

## EXPERIENCE

### Instructor, DukeTIP

Jun. 2018 – Jul. 2018

- Taught a total of 40 students for four weeks across two courses: Modern Programming and Artificial Intelligence
- Designed syllabi, conducted parent-teacher conferences, crafted assignments spanning five core topics: Fundamentals of Python Programming, Web Development, Pathfinding, Machine Learning, Natural Language Processing

### Software Engineer, Pindrop

Jun. 2017 – Jun. 2018

- Automated a data collection task that consumes 90 days' worth of data for researchers to create adaptive fraud detection models
- Optimized memory consumption for a new product to use 75% less memory than previous implementations
- Created new framework for continuously deployment of fraud detection models to production systems
- Migrated database records from Postgres to Redis and used custom key-value encoding to optimize lookup times

### Teaching Assistant for Introduction to Artificial Intelligence, Georgia Tech

Aug. 2016 – Dec. 2016

- Debugged assignments with students, reviewed course material during office hours, graded course exams

### Software Engineering Intern, Pindrop

May 2016 – Aug. 2016

- Designed database performance experiment to help determine which relational database scaled appropriately for the expected load of 1 million requests/day
- Helped re-architect existing monolithic backend API server with smaller, independent microservices for easier integration with Kubernetes

### Associate Developer IT & Intern IT, The Home Depot

Mar. 2015 – Aug. 2015

- Designed path planning algorithm for autonomous floor cleaning bot to traverse store aisles and return to charging station
- Utilized Computer Vision and Optical Character Recognition libraries to scrape driver's license information from images

## PROJECTS & RESEARCH

### Computing Betweenness Centrality for Streaming Graphs, Dr. Oded Green, Georgia Tech

Aug. 2016 – May 2017

- Ported algorithm for computation of betweenness centrality onto NVIDIA GPUs using cuStinger framework

### Humor Genome Project, Georgia Tech

Aug. 2015 – Dec. 2016

- Developed web application that crawls Reddit pages for jokes and recommends jokes for users to view and rate

## LEADERSHIP & ACTIVITIES

### Big Data Club, Member

Aug. 2015 – Dec. 2015

- Utilized WikiData API to extract relationships between news article entities to enable better searching capabilities

## SKILLS

- **Coding:** Python, Golang, Java, C, C++, MATLAB, MySQL, MongoDB, JavaScript, HTML, CSS
- **Software:** AWS, Docker, Kubernetes, Autodesk Inventor, Photoshop
- **Frameworks/Tools:** Scikit-Learn, Numpy, Pandas, PyTorch, Flask, Spark, OpenCV, Arduino, Android