Muhammad **Osama** Sakhi

🌐 U.S. Citizen | ✉ msakhi3@gatech.edu | ⌂ www.sakhi.es | ⬛ mosdragon | 🔗 mosakhi

Education

Georgia Institute of Technology *Atlanta, Georgia*
MASTER OF SCIENCE IN COMPUTATIONAL SCIENCE & ENGINEERING *Aug 2017 - Dec 2019*
- **GPA:** 3.90
- **Coursework:** Computer Vision, Deep Learning, Numerical Linear Algebra, Machine Learning for Trading

Georgia Institute of Technology *Atlanta, Georgia*
BACHELOR OF SCIENCE IN COMPUTER SCIENCE *Aug 2013 - May 2017*
- **Coursework:** Machine Learning, Natural Language Processing, Robotics & Perception

Skills

Programming	Python, C, C++, SQL, Java, Golang, JavaScript, HTML, MATLab
Frameworks	PyTorch, Scikit-Learn, Pandas, OpenCV, SimPy, Spark
Other	AWS, GCP, Docker, Kubernetes, REST APIs, LaTex

Research

The REDUCE Project *Dr. Munmun De Choudhury*
GT SOCIAL DYNAMICS & WELLBEING LAB *Jul 2019 - Present*
- Created language model embeddings for social media data to feed into time-series model to forecast weekly suicide attempts
- Trained regression model using language features from millions of Tweets to serve as one learner in final ensemble approach

Facebook SUMO Challenge *Dr. Frank Dellaert & Dr. Ren*
RESEARCH ASSISTANT *Sep 2018 - Mar 2019*
- Trained a Faster-R-CNN network on 360 Degree RGB-D images to localize bounding boxes in 2D
- Recovered 3D bounding box predictions from 2D object detections for 100+ categories to place 2nd in SUMO Challenge
- Contributed to baseline methods for SUMO dataset paper with collaborators from Stanford and Princeton.

Experience

Georgia Institute of Technology *Atlanta, Georgia*
HEAD TEACHING ASSISTANT FOR INTRO. TO ARTIFICIAL INTELLIGENCE *Aug 2019 - Dec 2019*
- Managed a team of 17 Teaching Assistants responsible for all grading and projects for 450 undergraduate students
- Developed entirely new mass auto-grader system with built-in plagiarism detector to reduce grading time for each TA by 85%
- Created extensive new review guides for all core course concepts: Graph Search Algorithms, Reinforcement Learning, Probabilistic Inference, Neural Networks, and Decision Trees
- Served as guest lecturer on Particle Filtering for a class section with 300 students
- Organized and lead review sessions with co-TAs to better prepare students for exams and projects

The Home Depot *Smyrna, Georgia*
COMPUTER VISION INTERN *May 2019 - Aug 2019*
- Fine-tuned 20+ models to extract fine-grained features from furniture images to enable training of a generative model that could produce aesthetically compatible furniture collections
- Developed a reusable framework for quickly aggregating images from the various data sources, performing data cleanup and augmentations, fine-tuning ResNet/VGG models, and evaluating using F1 scores and confusion matrices

DukeTIP *Houston & Atlanta*
INSTRUCTOR *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 and crafted assignments spanning five core topics: Fundamentals of Python Programming, Web Development, Graph Search Algorithms, Machine Learning, Natural Language Processing

Pindrop *Atlanta, Georgia*
SOFTWARE ENGINEER *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 service to use 75% less memory than previous implementations
- Created new framework for continuous deployment of fraud detection models to production systems