

# HENRY SABA

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## WORK EXPERIENCE

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### Software Engineer, Lazard (Data Analytics Group)

New York, NY

September 2019 - Present

- Built event-driven, fully-automated ETL pipelines with Data Vault 2.0 hashing design pattern to orchestrate daily movement of over 200 million structured records from various data providers
- Built an ensemble clustering algorithm with HDBSCAN and K-Means to guide the firm in coordinating a carpool service for employees returning to work during the COVID-19 pandemic
- Integrating message queues with real-time processing abilities to enable communication across microservices

### Software and Machine Learning Intern, Derq

Dubai, United Arab Emirates

June - August 2018

- Derq uses AI and V2X technologies to predict and prevent road accidents in real-time
- Reduced costs of in-vehicle system by 10% by developing Bluetooth application for in-vehicle system to alert for potential collision with vehicles/pedestrians
- Trained and assessed performance of object detection algorithms for usage in traffic safety solutions
- Configured deep learning models on embedded AI computing devices to boost prediction speed

### Software Research Assistant, Vertically Integrated Projects - Robotic Musicianship

Atlanta, GA

August 2016 - May 2017, August - December 2017

- Developed Python algorithms to identify properties of music such as consonance levels and major-minor tonality
- Implemented module for audio systems to autonomously decide what song to play based on various parameters
- Created interactive app that gathers training data from users for machine learning applications

### Android Development Intern, WhiteBeard

Beirut, Lebanon

June - August 2016

- Developed Android app that uses BLE beacons to register employee locations in office for productivity monitoring
- Improved development time with authentication package that automatically handles various social logins

## EDUCATION

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### GEORGIA INSTITUTE OF TECHNOLOGY

Atlanta, GA

B.S. Computer Science (Highest Honors)

August 2015 - May 2019

- GPA: 3.86
- Concentrations: Devices & Artificial Intelligence
- Certificate: Information Technology Management

### HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

Clear Water Bay, Hong Kong

University Exchange Program

January - May 2018

### OXFORD UNIVERSITY

Oxford, UK

Faculty-Led Study Abroad Program

May - August 2017

## PROJECTS

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### Tinder Automation and Analytics Tool (Personal Project)

- Programmed Python script to generate word clouds of Tinder bios while swiping right on bios with positive sentiment

### Activity Alarm (Hardware Prototyping Class Project)

- Created alarm that goes off if a person does jumping jacks in front of a 22x22 grid of photoresistors
- Implemented multi-class neural network from scratch to aid in accurately classifying physical activity

### Tinder Spam Detector (Personal Project)

- Reduced fake Tinder accounts in Dubai with an automated object detection algorithm that uses transfer learning from TensorFlow model zoo to identify accounts with fraudulent characteristics in their images

### RestoPresto (Database Management Class Project)

- Implemented general-purpose DBMS for university students to obtain live information about on-campus food trucks while simultaneously allowing food trucks to gain accurate data about consumer spending habits

## SKILLS & INTERESTS

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**Programming Languages:** Python, Java, C, C++, C#, Swift, SQL, R, HTML/CSS/JavaScript

**Technologies:** MySQL, Airflow, Docker, Kubernetes, Prefect Flow, Flink, React, Pandas, Scikit-learn, Scrapy

**Online Courses:** Machine Learning (Stanford University), Deep Learning for Coders (University of San Francisco), Complete Web Developer in 2020 (Udemy.com), Master Apache Airflow (Udemy.com), Docker and Kubernetes (Udemy.com), Entrepreneurship 101: Who is your customer? (MIT), Agile Project Management (lynda.com)