

Kareem Moussa

kamoussa.me | github.com/itstehkman | linkedin.com/in/kamoussa | 408-368-3938

Objective

To find a full-time software engineering position after I graduate in December 2017. I am particularly interested in working on distributed systems, infrastructure, security, networking, big data, or machine learning.

Education

University of California, San Diego

San Diego, CA

B.S. Computer Science

Expected: Dec 2017

GPA: 3.83, *Provost Honors*

Relevant Coursework:

- *Distributed Systems (Graduate)*
- *Operating Systems*
- *Computer Architecture*
- *Deep Learning / Neural Networks*
- *Computer Security*
- *Advanced Algorithms*
- *Networked Services*
- *8-Bit System Game*
- *Statistical AI*

Work Experience

Leanplum / KPCB Engineering Fellow 2017

San Francisco, CA

Software Engineering Intern (Infrastructure)

June 2017 – Sept 2017

- Using Java / Python and Google Cloud Platform to optimize Google Cloud Storage and BigQuery costs
- Using Kubernetes, Google Container Engine, and Cassandra to deploy our API and internal microservices

Apple

Cupertino, CA

Software Engineering Intern (Accounts and Authentication)

Mar 2017 – June 2017

- Prototyped a new feature for macOS. Skills involved: Auto Layout, Interface Builder, networking, concurrency
- Built multi-node CI build pipeline for the team's dependency graph of projects using Jenkins and Python

Apple

Cupertino, CA

Software Engineering Intern (Developer Tools)

June 2016 – Sept 2016

- Improved upon the project search tool in Xcode 9, and made contains-word searches 38% faster
- Skills involved: concurrency, batching I/O, MVC pattern, parsing techniques, Unicode, performance debugging

Musicnear.me (www.musicnear.me)

Remote

Full-stack Developer

Feb 2016 – June 2016

- Used Angular.js and Meteor.js to create dashboard of live music video streams using Periscope and Twitch

Hacker Dojo

Mountain View, CA

Software Engineering Intern

May 2015 – July 2015

- Contributed to unit tests, the REST API, and the frontend, all using Python, Django and Google App Engine

Highlighted Projects (see all my projects at kamoussa.me/projects)

- **Intel 8080 Emulator [Objective-C, C]**: Emulated CPU / IO / Graphics of this machine. It plays Space Invaders!
- **Video streaming service [Python, Go, Docker]**: Streaming videos on demand over HTTP(S) at large scale. Uses Nginx / HAProxy load balancer, Kubernetes cluster management, S3 / Redis storage, and Amazon CDN.
- **Distributed File System [Java, Apache Thrift]**: File system with a naming node & storage nodes. File replication every 20 accesses. Uses readers/writers locks over RPC (one thread per call) to gain access to a path.
- **Age & Gender Classification Neural Network [TensorFlow, Keras]**: Combined two state of the art convolutional neural networks (shallow nets / Deep Expectation) to classify age & gender, given a faces dataset
- **Video Captioning Neural Network [TensorFlow]**: Used the UCF101 video dataset of actions to train a Recurrent Neural Network (LSTM) to caption videos based on what actions people are doing.
- **Eat Your Donuts iOS [Swift]**: Eat donuts falling on the screen using your mouth, using face feature detection.
- **Voice Commanded LED Timer [Objective-C]**: Used Wit.ai to capture user intent over voice to set a task timer on an Electric Imp circuit with 5 LEDs, where each task is associated with a user's intent on one of the LEDs.

Skills:

- **Programming:** Strong: Python, C, C++, Objective-C
Proficient: Swift, JavaScript, Java, Go, Haskell, Ruby, R, HTML/CSS
- **Dev/Lab Tools:** Linux, Git, Xcode, Vim, Docker, MySQL, Redis, Hadoop, Kafka, Spark, IntelliJ, LaTeX, Amazon AWS, nginx, Kubernetes, Google Cloud Platform, TensorFlow