# Konstantino Sparakis

(718) 508 2663

ksparakis@gmail.com

https://www.linkedin.com/in/sparakis

https://github.com/ksparakis/


COMPUTER ENGINEER

## EDUCATION

**Boston University**

*September 2016*

Bachelors, BS Computer Engineering

Minor, Business Administration

*Expected May 2017*

Masters, MS of Computer Engineering

## FLUENT SPOKEN LANGUAGES

English, Greek & Spanish

## AREAS OF INTEREST

Cloud Computing, Cyber Security, Distributed Systems, Embedded Systems, & Operating Systems

## COMPUTER LANGUAGES

Asp .Net, Bash, C, C#, C++, CSS, Html, JQuery, Java, JavaScript, Node JS, Objective-C, Php, Python, Ruby, & SQL.

## TECHNICAL SKILLS

AWS, Computer Architecture, Digital Logic, Docker, Full Stack Dev., IOT, Kernel Dev., Microprocessors, Mobile Dev., Object Oriented Programing, REST API's, Scrum, Unix Terminal, Virtualization

## EXPERIENCE

### Software & Security Eng. Intern

**Lexumo | Boston, MA**

**March 2016 – present**

Perfecting Lexumo's client software, which streams compilation data to their cloud where it can be checked for open source vulnerabilities.

- Ensuring compatibility with majority of Unix Operating Systems, by creating portable binaries and adding static libraries.
- Restructuring and organizing client Python code for expansion to interpreting more languages.
- Creating a unit test suit for automated testing.

### Software Engineering Intern

**Carbonite | Boston, MA**

**May 2015 – Jan 2016**

**Cloud Infrastructure Team**

- Amazon Web Services
  - Finding limitations of AWS
  - Communicating with AWS support engineers for solutions.
  - Using Key Management Service for data encryption.
  - Researching Lambda and API Gateway for scalable backend.
  - Implemented method for using S3 bucket as a virtual hard drive within a private network using Avahi.
  - Researching & Implementing VPC for security.
- Writing scripts for customer usage analytics in Ruby and Bash.
- Researching and testing methods of recovering a physical machine from a cloud back up.
  - Booting from & modifying VHD image to inject software and scripts
- API design using Swagger.
- Created Microsoft PowerShell applets for multiple use cases.

**Quality and Assurance Team**

- Working with Jenkins to launch automated test suits in Amazon Web Services for backup hardware appliance product.
  - Ruby script that installs all software to emulate stands alone hardware on EC2.
  - Working with EC2 boot scripts.

# PROJECTS

## APEKIT: Android Vulnerability Analysis

Fall 2015

- Python Pipeline that reverses engineers Android APK's to source code, & statically analyzes for vulnerabilities.
- Analyzed over 1000 Android applications
- Discovered API keys including Amazon Web Service keys.

## Sundial: Solar Unit Monitoring

Fall 2015- May 2016

- Hardware-to-Cloud solution for monitoring solar units power usage in rural Africa.
  - Created Custom PCB interfaced with zigbee like chip for star network communication that plugs into solar unit.
- Deployed for Oolu Solar in Senegal, Africa that manages 200+ rural villages and growing.
- Architected and Implemented Java Android application.
  - Sugar ORM for SQLite DB
  - LoopJ Asynchronous Http Methods Library for api communication.
- Assisted architecture of PostgreSQL DB data model & Restful API routes

## ReClo: Cloud Disaster Recovery

Spring 2015

- Architected & implemented a proof of concept, in collaboration with Carbonite.
- Presented & Demoed in Massachusetts Open Cloud Conference
- C# Windows Clients
  - Backs up users' computer to Amazon Web Services S3 as a VHD image.
  - Restore client communicates with backend to start process of converting VHD image to an EC2 virtual machine in AWS, which connects back to user via vpn.
- Backend consists of Node JS Restful API, built using Express.

## Ambios: Dynamic Ambient lighting for computer monitor

Spring 2015

- Used port sniffer to find protocol used by Prismatik software, which live captures color displayed on monitor and sends it via serial port to hardware.
- Using a Texas Instrument MSP430 microprocessor programmed in C & custom circuit design attached to Led Strips, emulated a Prismatik compatible device to intercept color information and display it on LED strip.

## 24 Hands: Embedded Systems

Spring 2015

- 7 Segment display created by moving a single clock hand into proper position.
- 24 Stepper motors controlled by custom logic circuit connected to a raspberry pi & Gumstix embedded processor.
- I2C communication between Gumstix and Raspberry pi
- Ti watch with accelerometer and RF communication sends commands of what to display via gestures.

## Networking in the Physical World

Fall 2014

Collection of Internet of things Projects based off of Sun Systems Sun Spot microcontrollers.

- Report room temperature to cloud infrastructure and display live and historic data view via custom web interface.
  - Php backend with MySQL DB
- Using Radio Frequency Strength indicator for indoor localization with live web view
  - Matlab calculation for localization algorithms.
  - Java socket & Php – MySql Backend
- Controlling a servos car Wirelessly with a sunspot
  - Custom Android application to control car via Java Socket
- Created a wall following algorithm for servos self-driving automated car.