

SEOK HYEON HONG [BRIAN]

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SKILLS & ABILITIES

Fluent in Java, C/C++, MATLAB, and Android Development, experienced with embedded system development, Assembly(x86, ARM, MIPS & PIC), Verilog, software development with utilities like Git, Vim, Bash, and Make. Knowledge of basic networking and systems management/architecture
Work primarily with Linux/UNIX-like systems. (But) proficient with Microsoft Word and Excel.
Foreign Languages: Can read, write, and execute Korean to professional level.
Licensed HAM Radio Operator (Callsign: KD2LSL)

EDUCATION

THE COOPER UNION, 30 COOPER SQUARE, NEW YORK, NY 10003
ALBERT NERKEN SCHOOL OF ENGINEERING
2015 - 2019 (EXPECTED)

Electrical and Computer Engineering

Overall GPA: 2.9

Major GPA: 3.8

Classes taken: Operating Systems, Digital Signals Processing, Circuit Analysis, Calculus II, Programming Languages, Intro to Linear Algebra, Vector Calculus, Ord & Part. Differential Equations, Signal Processing & System Analysis, Data Structures & Algorithms I & II, Computer Architecture, Computer Security, MATLAB Seminar.
Classes Included in Major GPA: Programming Languages, Signal Processing & System Analysis, Computer Architecture, Data Structures&Algorithms I, Computer Security

BRONX HIGH SCHOOL OF SCIENCE, 75 WEST 205 ST, BRONX, NY 10468

2011 - 2015

Overall GPA: 89.3 (Unweighted)

Science GPA: 91.4

Math GPA: 94.4

ACT: 33

EXPERIENCE

(REVERSE) ENGINEERING INTERN @ RED BALLOON SECURITY

MAY 2016 - PRESENT

Worked on various research and reverse engineering projects involving firmware/binary analysis of various processor architectures, soldering, and building various hardware and utilities in Python and C. Did circuit and PCB design. Worked closely with ARM-based devices. Learned to grill.

SENIOR SYSTEM ADMINISTRATOR @ THE COOPER UNION

JAN 2016 - PRESENT

Ensure fluid upkeep of local and public network and services; manage servers and virtual machines that host such services. Work with LDAP/Kerberos/AFS integration, account setup, and data transfer.
Construct OS images for Linux based servers and clients, as well as Windows clients.

TEACHING ASSISTANT @ THE COOPER UNION

SUMMER 2015 & 2016

Digital Electronics for the **Summer High School STEM Program**. Taught to analyze and design digital electronic circuits and Boolean arithmetic as well as basic electronics. Assisted students in designing and constructing electronics projects.

PROJECTS

MONITOR DARKLY <http://www.github.com/RedBalloonShenanigans/MonitorDarkly>

SUMMER 2016 (RED BALLOON SECURITY)

Reverse engineered the Dell U2410 monitor firmware & debugging protocol to achieve arbitrary memory write & code execution. Worked on a few scripted that demoed the attacks. Got accepted to talk at **DEFCON 24**.

BSOS-REBORN <http://www.github.com/awkwardbunny/bsos-reborn>

FALL 2014 - PRESENT

Designing and implementing a kernel/operating system from scratch for learning purposes. Currently built to be run on an x86 machine. Implemented paging, interrupt handling, and bootloader. Plans of implementing processes, user space, scheduler, etc after taking course on Operating Systems.

TESLA'S WRATH <https://github.com/fdcabb611f5e10605d933575bcac24c9/teslas-wrath>

HACKMIT 2016

Designed and implemented a proof-of-concept to bypass airgapped security systems through radio emissions without any hardware modification. Succeeded in producing binary encoded radio waves with an Intel Edison.

BRIAN'S SCRIPTS <https://github.com/awkwardbunny/scripts>

OCTOBER 2016 - PRESENT

A moderate sized collection of scripts written and gathered over the years to help and automate things to make life easier. Some scripts include: Fetching and notifying when grades come online, auto-registration for classes, addition&modification of users of school's Kerberos realm... Scripting is an addiction...

HOMELAB

OCTOBER 2016 - PRESENT

Set up and maintain a small homelab at the apartment. Project started for fun and to gain experience/knowledge in networking, managing virtual machines, and maintaining different services such as mail, ssh, web, DHCP, DNS, and file servers. **MORE PROJECTS CAN BE FOUND ON GITHUB PROFILE**

LEADERSHIP| ASSOCIATION FOR COMPUTING MACHINERY @ COOPER UNION (Vice President)

2015 – PRESENT

With IEEE@Cooper Union, organize events and talks about Electrical Engineering, often having people from small & large companies over for recruitment and to give a talk about what they do.

PANYKTECH, LLC (Chairman & Co-Founder)

2015 – PRESENT

R&D

Currently still developing company structure and in planning stages.

BRONX SCIENCE ROBOTICS (SCIBORGS) (Head of Programming Dept.)

2013 – 2014 SEASON

Competed in FIRST Robotics Competition as part of SciBorgs (1155).

Managed the programming department of the robotics team.

Picked out members and taught them basic programming in Java and code management.

AWARDS| Half-Tuition Scholarship (2015-2019)

Innovator Merit (2015-2017)

Hawthorne Scholarship (2016-2017)

Received by The Cooper Union

National Merit Commendation (11th grade)

Received by CollegeBoard

Best Bloomberg API Use Award (Nov 2014)

HackRPI Hackathon

Received by Bloomberg at Rensselaer Polytechnic Institute