Paul Hyungmin Kim

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Education and Certifications

University of California - Los Angeles (UCLA) **Expected: 2017**
B.S. Computer Science Major GPA: 3.55

CompTIA Security+ Certification **Expires January 2020**
- Globally recognized security focused certification offered by CompTIA
- Covers major security topics such as network security, operation security, threats and vulnerabilities, data and host security, identity management, and cryptography

First Aid/CPR/AED **Expires November 2017**
- Certified for first response handling in First Aid, CPR, and AED by American Heart Association

USA Archery Level 1 Coach **Expires July 2017**
- Certified by USA Archery as a level 1 coach
- Responsibilities include basic archery introduction and guidance to small groups

Work Experiences

USA Archery | Electronic Scoring Team **June 2015-July 2016**
- Managed and operated Rcherz, a wireless archery scoring system built for iOS and Android
- Built on a web server that monitors and organizes the tournament scoring of all archers

Laboratory for Advanced Systems Research (LASR) **August 2015-January 2017**
- Research lab at UCLA under Professor Mario Gerla and Peter Reiher
- Investigates the security and network problems associated with automated vehicles

UCLA Archery Officer – Equipment Manager **May 2016-May 2017**
- Educate and guide club members on proper equipment fitting, purchasing, and handling
- Oversee all archery club's equipment purchases and management needs

Projects

*Comprehensive list available on www.paulhmkim.com/projects

Deter Security Suite
- Simulated security scenarios by University of Southern California and University of Utah
- Explored attack methods, firewalls, forensics, network analysis, and anomaly detection

Mini-Java Compiler *Source Code Omitted for Academic Integrity*
- Fully functional compiler from a subset of Java to assembly language MIPS
- Built a type checker to ensure correctness of input, as well as a parser for Java

Prereq https://github.com/mkachuee/PlainYogurt
- Web application designed to help users learn by guiding them through a set of sub-topics
- Built with Django with MySQL as database and HTML/CSS/Javascript for frontend
- Tested with Selenium throughout development for regression testing

NOMS https://github.com/paulmkim/NOMS
- Social event planning application built for Android
- Built with Android Studio, PHP scripts and MySQL hosted by Amazon Web Service
- Load balancing and security measures managed through Amazon Web Service

LoLCounter https://github.com/paulmkim/lolcounter

- Web application focused on helping League of Legends players pick the best team
- Built with Ruby on Rails and hosted on Amazon Web Service
- Incorporated load testing with Tsung and simulated high traffic
- Main backend based around large database to properly test scalability

ObjectRekt http://devpost.com/software/object-rect

- Automated camera that observes the scene and tracks a presenter's location
- Used FLIR Lepton managed by Raspberry Pi to locate the presenter's infrared thermal image

Exploring the Development and Split of TCP/IP

- Paper exploring the historical and technological context of a layered network system
- Discusses each layer's original intent, as well as current uses
- Incorporate the knowledge and opinion of multiple first-hand developers of the internet
- Conclude on the reasoning and benefits behind the TCP/IP split

Publications

INTERLOC: An Interference-Aware RSSI-Based Localization and Sybil Attack Detection Mechanism for Vehicular Ad Hoc Networks - Garip, M.; Kim, P.; Reiher, P.; Gerla, M.

- Accepted to IEEE Consumer Communications and Networking Conference - 2016
- Created and tested localization techniques using RSSI values using network simulations

GHOST: Concealing Vehicular Botnet Communication in the VANET Control Channel - Garip, M.; Reiher, P.; Gerla, M.

- Accepted to International Wireless Communications & Mobile Computing Conference – 2016
- Demonstrated the 802.11p standard's weaknesses by embedding secret messages
- Analyzed information transfer rate based on bot density, message frequency, and signal range

Relevant Coursework

Introduction to Computer Security	Computer Network Fundamentals
Operating Systems Principles	Compiler Construction
Software Engineering	Programming Languages
Algorithms and Complexity	Scalable Internet Services

Skills, Tools, and Interests

Programming Languages: C, C++, Python, Java, Ruby, PHP, MIPS, Prolog, OCaml, LISP
Security Skills: Wireshark, Burp, Firewall Configuration, POSIX Permissions, Log Analysis
Front End Development: HTML, CSS, Javascript, jQuery, D3, Bootstrap
Developer Tools: Github, AWS, Agile, Ruby on Rails, Django, Visual Studio, Android Studio, Tsung Test
Operating Systems: Windows, UNIX, Linux, Android
Second Language: Korean
Hobbies and Interests: Competitive Archery, Cooking, Poker, Guitar