KIJIN AN

Ph.D. Student, Department of Computer Science, Virginia Tech
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(a) Education

2015–present: Ph.D. Student, **Virginia Tech**, Computer Science, Blacksburg, VA
Advisor: Prof. Eli Tilevich, *Sotware Innovations* Lab
http://people.cs.vt.edu/~tilevich
Dissertation Title: "Enhancing Web App Execution with Automated Reengineering"

2007–2009: M.S., **POSTECH**, Computer and Communication, Pohang, South Korea
Advisor: Prof. Hwangjun Song, *Multimedia Computing and Networking* lab
http://mcnl.postech.ac.kr

2003–2007: B.E., **University Of Seoul**, Electrical and Computer Engineering, Seoul, South Korea

(b) Employment

2015–present: **GRA/GTA**, Department of Computer Science, Virginia Tech, Blacksburg, VA
Understanding Heap-Spraying Attacks: Developed a core course project for VT CS2506.
http://courses.cs.vt.edu/cs2506/Spring2018/C/HS/handout.pdf

2012–2015: **Researcher**, Robotics Research, KIST, Seoul, South Korea
Supervisor: Dr. JongSuk Choi
SimonPiC: Networked Vision System for interacting humans and robot in a Smart Classroom, *18th Industry Technology of This Month*. I was project manager from 1st to 4th years
http://www.robot-intelligence.kr/index.php/3W_for_HRI

2009–2012: **Engineer/Assistant Manager**, SK telesys, Pankyo, South Korea (Military Duty)
http://www.sktelesys.com/eng
3·4G equipments R&D: WiBro, 3·4G RF/Optic Repeaters (TRIO-L/M, MiBoS, eIBS), IPPBX

(c) Research Keywords

Software Engineering, Web Apps, JavaScript, Program Analysis, Cloud/Edge Computing

(d) Skills

Programming: JavaScript, Java, C/C++, Python, SQL, Datalog
Package: V8, z3, angular/cordova, LLVM, optee-os, ROS, Blender, PCL, Ptolemy, ns-2
Hareware: rpi, Android/iOS, turtlebot, Kinect/Hokuyo, PSA/RF signal generator

(e) Publication

1. **Kijin An** and Eli Tilevich, "Client Insourcing: Bringing Ops In-House for Seamless Re-engineering of Full-Stack JavaScript Applications," *Proceedings of the Web Conference (WWW)*, April 2020. (**19%, 217/1129**).
2. **Kijin An**, "Enhancing Web App Execution with Automated Reengineering," *Proceedings of the Web Conference (Dotoral Symposium WWW)*, April 2020.

3. **Kijin An** and Eli Tilevich, "D-Goldilocks: Automatic Redistribution of Remote Functionalities for Performance and Efficiency," *Proceedings of the 27th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER 2020)*, February 2020. (**21%, 42/199**)
4. Yin Liu, **Kijin An**, and Eli Tilevich, "RT-Trust: Automated Refactoring for Different Trusted Execution Environments under Real-Time Constraints," *Journal of Computer Languages (COLA)*, Accepted for Publication, **Journal Article**.
5. **Kijin An** and Eli Tilevich. "Catch & Release: An Approach to Debugging Distributed Full-Stack JavaScript Applications", *19th International Conference on Web Engineering (ICWE 2019)*, June 2019. (**25%, 26/106**)
6. **Kijin An**, "Facilitating the Evolutionary Modifications in Distributed Apps via Automated Refactoring," *19th International Conference on Web Engineering (Doctoral Symposium ICWE 2019)*, June 2019.
7. Yin Liu, **Kijin An**, and Eli Tilevich, "RT-Trust: Automated Refactoring for Trusted Execution Under Real-Time Constraints," *Proceedings of the 17th International Conference on Generative Programming: Concepts & Experience (GPCE 2018)*, Nov 2018.
8. **Kijin An**, Na Meng, and Eli Tilevich, "Automatic Inference of Java-to-Swift Translation Rules for Porting Mobile Applications," *MobileSoft*, 2018, **Nominated for a best paper award**.(6%, 3/52)
9. **Kijin An**, Geunjae Lee, Sang-Seok Yun, and JongSuk Choi, "Multiple Humans Recognition of Robot Aided by Perception Sensor Network," *URAI 2015*.
10. Geunjae Lee, **Kijin An**, Sang-Seok Yun, and JongSuk Choi, "A Simultaneous Robot Service Scheme for Multi-Users," *In. Proc. Int. Conf. Ubiquitous Robots and Ambient Intelligence (URAI)*, pp. 373-374, Oct. 2015.
11. Anh Vu Le, **Kijin An** and JongSuk Choi, "Multiple Human Tracking on Robot Operation System," In. Proc. Int. Conf. Ubiquitous Robots and Ambient Intelligence (URAI), Oct. 2015.
12. **Kijin An**, Hyeon-woo Park and JongSuk Choi, "Reliable Fusion method of multiple Human information over a Heterogeneous Sensor Network," *IEEE RO-MAN*, 2015. (extended abstract)
13. Anh Vu Le, **Kijin An** and JongSuk Choi, "Group-based multiple people tracking in perception sensor network," *IEEE RO-MAN*, 2015. (extended abstract)
14. JiGwan Park, **Kijin An**, and JongSuk Choi, "Low-Body-Part Detection using RGB-D camera." *Proceedings of the Tenth Annual ACM/IEEE International Conference on Human-Robot Interaction(HRI)*, Extended Abstracts. ACM, 2015. (video presentation)
15. **Kijin An**, JiGwan Park, Minh Do Hoang and JongSuk Choi, "Dispensing Materials of mobile Robot cooperating with Perception Sensor Network," URAI 2014.
16. JiGwan Park, **Kijin An**, and JongSuk Choi, "Realistic 3D simulation of multiple human recognition over Perception Sensor Network," *ROMAN*, 2014.
17. JiGwan Park, **Kijin An**, Daijin Kim and JongSuk Choi, "Multiple Human Tracking using Multiple Kinects for an Attendance Check System of a Smart Class," *URAI*, 2013. (video presentation)
18. **Kijin An**, JongSuk Choi, "A 3D Simulation Approach for Multi-human Detection using a Multi-sensor frame," *ROMAN*, 2013.
19. Wan Kim, Hyunchul Joo, **Kijin An**, Inkyu Lee, and Hwangjun Song, "Urgency-based scheduling and routing algorithms for delay-sensitive data transmission over mobile ad hoc networks," *ACM/Springer Wireless Networks*, Vol. 19, No. 7, pp. 1595-1609, 2013. (**Master thesis**, **Journal Article**)
20. Wan Kim, Hyunchul Joo, **Kijin An**, and Hwangjun Song, "A novel packet urgency metric-based cross-layer design for video streaming over multi-rate MANETs," *IIWCMC* 2013.
21. Hyunchul Joo, **Kijin An**, and Hwangjun Song, "Urgency-based Packet Scheduling and Routing Algorithms for Video Transmission over MANETs," *CCWMC* 2011.
22. **Kijin An** and Hwangjun Song, "An effective cross-layer packet scheduling and routing algorithm for delay-sensitive media transmission over MANET," *International Conference on Communications (ICC)*, 2009.