MINWOO (JOSH) KANG

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EDUCATION

BA | Computer Science & Physics

Williams College | Class of 2020

- Overall GPA: 3.97, CS GPA: 4.00
- Phi Beta Kappa (top 5% of class); CS Class of '60 Scholar

EXPERIENCE

Williams College Bailey Lab

Computer Architecture Research | Thesis Student

Jun 2019 – Present Williamstown, MA

- Research on developing a RISC-V adaptive processor with a reconfigurable array of energy-conserving accelerators
- Building RoCC accelerators; final architecture to be implemented on Xilinx Nexus-A7, on top of the lowRISC SoC with Berkeley Rocket core
- Presented poster at 2019 Williams Summer Science Research

PillPack

Software Engineering Intern

Winter 2019 Sommerville, MA

- Research project on AWS Elasticsearch based fuzzy search to efficiently query patient information, e.g. ICD-10 codes

Williams Materials Physics Lab

Soft Materials Research Assistant

Jan 2018 – Present Williasmtown, MA

- Research on solvent phase separation phenomenon in soft silicone gels under adhesive contacts
- Developing image processing code in MATLAB to directly measure fluid separation volume from confocal microscopy images
- PDMS gel synthesis; CAD-designed and built a microscope-compatible bi-axial stretcher
- Presented posters at 2018 Soft Days at UMass Amherst and 2018 Williams Summer Science Research
- In preparation of co-first author publication manuscript

UNCSB-Joint Security Area

Command Support Squad Leader | Sergeant

Sep 2015 – June 2017 Panmunjom, Republic of Korea

- Military service with the Republic of Korea Army at UNCSB-JSA, a ROK-US combined unit securing the inter-governmental conference area on the Korean border
- Led command support squad and participated in high-level visitor escort operations, KOR-ENG translations and field recon patrols as a radiotelephone operator

CLASS/IND PROJECTS

WAVE

- WAVE is an emulator for ARM-like assembly written in x86_64
- Final project for CSCI 237 Computer Organization; ranked 1st in code optimization contest

KCICK

- KCICK, the KCICK Consulting Interview CracKer, is a F#-based DSL that will answer 'Fermi questions' notoriously asked during management consulting job interviews
- Final project for CSCI 334 Principles of PL

Williams Mobile

- Lead developer of new social events feature for real-time events advertising and notifications

TEACHING @ WILLIAMS

Fall 2019
computer organization

Spring 2019
algorithm design and analysis
vibrations, waves and optics

Fall 2018
electricity and magnetism

Spring 2018
foundations of modern physics

SELECTED COURSEWORK

parallel processing
theory of computation
computer organization
programming languages
graph theory
applied real analysis
condensed matter physics
applications of quantum mechanics

SKILLS

Programming Languages
C/C++, CUDA, Java, x86 & RISC-V assembly

Hardware Development
Chisel, Verilog, Vivado

Miscellanous
MATLAB, React-Native & Javascript