JUCHAN "DAVID" KIM

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EDUCATION

University of California, Berkeley - Berkeley, CA — May 2017
- Bachelor of Science in Electrical Engineering & Computer Science — GPA: 3.55
- Study Abroad @ University College London — Fall 2016

RELEVANT SKILLS

- Proficient: Python, Java, C/C++, Node.js, JavaScript, Ruby on Rails (RSpec & Cucumber), Verilog
- Working knowledge: SQL, HTML/CSS, OpenMP, Scheme, MIPS, Android Applications
- Other Software: Linux, Unix, Adobe Photoshop, Adobe Premiere Pro

WORK & TECHNICAL EXPERIENCE

Intern - IT Systems and Solutions – Lionsgate — **Summer 2016**
- Implement tools used by 800+ employees internally and develop automated scripts using Python, NodeJS, and various API's and SDK's (Box, Rackspace Cloud Technologies, SendGrid, etc.)

Reader, Lab Assistant – EECS Department, UC Berkeley — **January 2014 – May 2016**

EE16B: Designing Information Devices and Systems II; CS61A: Structure and Interpretation of Computer Programs; CS61B: Dat Structure; CS61C: Machine Structures
- Assist 60-80 students with the course material in their lab times and at homework parties
- Debug homework problems and design worksheets for the "guerilla" sections
- Enhance my communication skills, problem-solving skills, and teaching skills

Teaching Assistant – South Central Scholars' Java Programming Camp — **December 2015 – January 2016**
- Design small programs and two large projects – Sudoku and Hangman - for the students to write during the lab
- Teach File I/O and Recursion, and assist USC Professor Jeffrey Miller in his lab with 20+ students

Software Engineer – UC Berkeley MOOCLAB — **May 2015 - September 2015**
- Improve Professor Armando Fox's Massive Open Online Courses (MOOC) offered to over 8000 students
- Remodel the Ruby based autograder system for edX online learning platform to automatically grade student code against rubrics

TECHNICAL PROJECTS

Extension of an existing Pathtracer – C++ — **Spring 2017**
- Implement subsurface scattering using dipole model to render translucent materials

3-stage CPU (RISC-V) – Verilog — **Spring 2017**
- Design, implement, debug and optimize the core as well as the cache for the processor (direct mapped)

Digit Recognition – Python — **Spring 2016**
- Use different Machine Learning approaches such as Gaussian Classifier, SVM, and Neural Networks to classify handwritten digits using raw pixels as features – best being over 90 percent correct in classification of the given test set

Extension of an existing Operating System, "PintOS" – C — **Fall 2015**
- Add additional features to the thread system including non-busy waiting alarm clock, priority scheduling with and without priority donation, and a multilevel feedback queue scheduler
- Extend the User Programs system to support passing arguments to new processes, and all the available System Calls
- Implement Buffer Cache, Hierarchical Directory tree structure, and Indexed File System

Let Us Eat – Android App — **March 2015**
- Develop an Android App that uses location and phone numbers to gather people nearby for a meal
- Implement the user authentication & registration process, storing user database on Parse

Strongly Solving Puzzles – Python — **October 2014**
- Utilize Apache Spark Framework - MapReduce - to construct a breadth first solver that starts from a single solution of sliding puzzles and exhaustively visits the entire graph of solutions
- Process 4 GB of data

OTHER ACTIVITIES & VOLUNTEER EXPERIENCE

South Central Scholars — June 2013 - Present
Alpha Gamma Omega House Manager (2015-2016) — January 2014 - Present
BerKast (Berkeley Korean Broadcasting Station) Producer (Present); Assistant Director (2015-2016) — January 2015 – Present
Hackers @ Berkeley Workshop Committee (2014); Media Committee (2014- 2015) — January 2014 – May 2015
Berkeley Project — November 2013, November 2014