JUCHAN "DAVID" KIM

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EDUCATION

University of California, Berkeley - Berkeley, CA **May 2017**
- Bachelor of Science in Computer Science GPA: 3.55
- Study Abroad @ University College London Fall 2016
- Selected Coursework: Data Structures, Algorithms, Networks, Machine Learning, Computer Graphics, Operating Systems, Artificial Intelligence, Database Systems, Security

SKILLS

- Languages (in order of proficiency): Python (Django), Java, C (OpenMP), C++, JavaScript (Node.js, Express.js, AngularJS), HTML/CSS, Ruby on Rails, Verilog, MIPS
- Technologies/Environment: Git, Linux, Unix, SQL (SQLite), NoSQL (MongoDB), CGL, Android Studio

EXPERIENCE

Systems and Solutions Intern – Lionsgate **Summer 2016**
- Automate the manual process of transferring files used for movie websites from Box, a cloud storage platform, to Rackspace CDN for efficient content delivery around the world
- Use RESTful API's on command-line and SDK's in Node.JS and Python for writing automated scripts

Reader, Lab Assistant – EECS Department, UC Berkeley **January 2014 – May 2016**
- Assist 60-80 students per semester in successfully debugging and explaining the labs as well as the course material
- Solve and identify any bugs in homework problems for the students

Teaching Assistant – South Central Scholars' Java Programming Camp **December 2015 – January 2016**
- Design projects – including Sudoku - for students to write using the concepts that they have learned during labs
- Teach File I/O and Recursion, and assist USC Professor Jeffrey Miller in guiding 20+ high school students in his labs

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

PROJECTS

Weather Forecast - Web App (Express.js, AngularJS, Node.js) **November 2017 – Current**
- Create a web app using Google Maps API and weather API (Dark Sky) to allow location search for weather information
- Maintain search history database on MongoDB and deployed using Heroku

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

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

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 with accuracy over 90% on a dataset consisting of 10,000 images

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
- Implement Buffer Cache, Hierarchical Directory tree structure, and Indexed File System

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

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

OTHER ACTIVITIES

South Central Scholars **June 2013 – May 2017**

BerKast (Berkeley Korean Broadcasting Station) Producer; Team Lead **January 2015 – May 2017**

Hackers @ Berkeley Workshop Committee (2014); Media Committee (2014- 2015) **January 2014 – May 2015**