Ji Hoon Kang

3920 Pacific Place, Mukilteo 98275 | 425-530-5453 | jkang18@uw.edu | https://github.com/KangJay

Objective

- To obtain a full-time or part-time software development/engineering opportunity to further my understanding of the field from all levels of the stack.

Education

B.S | SEPT 2016 – JUNE 2020 | UNIVERSITY OF WASHINGTON

- Major: Computer Science and Software Engineering
- Related coursework: Data structures, algorithms, cloud computing, operating systems, computer architecture, software engineering principles, analysis and design of software, and networking (IP)
- GPA: 3.85 / 4.00

Skills & Abilities

- **Preferred languages:** Java, Python 3.x, C/C++, Bash
- **Tools:** Visual Studio, Visual Studio Code, Atom, Linux-env CLI, Bash
- **SQL/NoSQL Databases:** DB mechanisms, schema design, AWS RDS (Postgre), DynamoDB (NoSQL)
- **Cloud Computing:** AWS (S3, DynamoDB, Lambda, SNS, EBS, and others), RESTful APIs
- **Microsoft Office Suite and Google Productivity Suite**
- **Soft Skills:** Strong communication, adaptability, creativity, time-management, work ethic, interpersonal skills, problem-solving, conflict resolution, and research skills.

Experience

MEWS RESEARCHER AND SOFTWARE DEVELOPER | U. OF WASH. | APRIL 2019 - PRESENT

- Currently researching ways to implement differential privacy in a hospital server setting using adaptive DP-algorithmic methods to uphold individual differential privacy in neighboring datasets. The focus of the research is to combine encryption schemes on individual cyber physical devices (offload the computation to an external device) with differential privacy methods.
- Faculty Mentor: Geetha Thamilarasu, Professor at the University of Washington

SOFTWARE REQUIREMENTS DESIGNER | TRICKFIRE ROBOTICS | AUGUST 2018 – OCTOBER 2018

- Co-iterated the last year's Software Requirements Specifications (SRS) for the given codebase and the Robot Operating System (ROS) for the robotics team at the University of Washington Bothell.

MANAGER | HOTEL INTERNATIONAL | JUNE 2017 – SEPT 2018

- Day manager at Hotel International. Did daily management of inventory, guests, and reservations. Ensured our system's database had coherency with the guest reservation information in Expedia's and Booking.com's datasets.
- Main point of contact: Jonghan Kim, 425-771-1777 (Extension: 0)

Projects

MOTOROLLA 68K MACHINE CODE DISASSEMBLER

- Written in 68K assembly language, the program will read in machine code that's located in a portion of memory and "disassemble" it back into 68K assembly language. Worked on the user interface, IO operations, decoding of opcode instructions, and portions of the effective address decoding.

FILE BACKUP USING AWS SDK

- Using the Python Boto3/Botocore SDK, wrote a program in Python 3.x to recursively traverse the directory it's run in to back up files that are 1. Uploaded for the first time, and 2. Modified/changed in order to save bandwidth.

NEWS NOTIFICATION SYSTEM USING AWS SDK

- Hosted a website using AWS Elastic Beanstalk to sign users up. Users would select certain topics they'd be interested in and enter their phone number. Upon confirmation, they're added to a DynamoDB table with their specific information listed. Using Boto3 Python program using AWS Lambda, it would use a CloudWatch trigger to iterate through the DynamoDB table and send parsed API request information from NewsAPI (https://newsapi.org/).

TEXTFILE COMPRESSION PROGRAM – HUFFMAN COMPRESSION

- Written in C++, wrote two separate programs to compress a given text file and decompress the compressed text file back to the original's contents. Works on ASCII text files only (excluding certain extended ASCII characters). Saw space improvements of around ~60% of the original text file's size.

HOTEL MANAGEMENT DATABASE

- Database to manage a hotel system's branches, employees, reservations, payrolls, and room availability. Worked only on the schema design and CRUD operations pertaining to updating guest information. Utilized Postgre, AWS RDS, and Python 2.x to implement the program.