

# HYUN SOO JEON

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## EDUCATION

### Columbia University

Bachelor of Arts: Computer Science; **GPA: 3.62**, Dean's List

New York, NY

December 2020

#### Relevant Coursework

- Operating Systems, Networks, Design Using C++, Advanced Programming in C, Distributed Systems, Cloud Computing & Big Data, Databases, Programming Language & Translators, Data Structures, Artificial Intelligence, Computer Vision, Natural Language Processing

### Westchester Community College

Associate of Science: Journalism; **GPA: 3.91**, President's List

Valhalla, NY

May 2018

## TECHONOLOGIES & SKILLS

**Technologies:** C/C++, Python, Linux/UNIX, JavaScript, React, Go, OCaml, SQL, Networks, GCP, AWS, Makefile, Git

**Languages:** English, Korean

## PROJECTS

### Foodophile (Python, AWS, React)

- A serverless, microservice-driven web application that recommends restaurants in Manhattan, given a set of preferences that the user provides via chatbox
- Based on a conversation with the user, the application identifies the user's preferred cuisine.
- It uses a Yelp API to collect 5,000+ restaurants, stores them in a DynamoDB table, and then queries the table to find more information about the restaurants it wants to recommend to the user, such as names and addresses
- Then, it delivers the recommendations to the user via SMS message

### Synchronizer on Android Emulator (C)

- A new kernel synchronization mechanism that allows multiple processes to block on a rotation event until the emulator exceeds a certain rotational speed
- The device rotation state is accessed via an on-board gyroscope that reflects the rotational speed around X, Y and Z axis of the device, which is in turn polled by a daemon process that updates the device rotation state
- To be resistant to noise, the kernel records  $N$  rotational samples; only when  $n$  out of  $N$  samples exceed the threshold, the event is triggered

### Scheduler (C)

- A default Weight Multicore Round-Robin Linux scheduler that supports multiprocessor/uniprocessor systems
- Assigns the task to the CPU with the least total weight among all CPUs
- Fully supports load-balancing; an idling CPU pulls tasks from other working CPUs if it is eligible to be moved

### TCP Server (C++)

- A web server that implements a subset of HTTP 1.0, and that handles GET requests for static content
- The web server maintains a persistent TCP connection to a lookup server
- Providing an HTML front-end to the lookup server, the server returns dynamic content, specifically lookup records formatted in an HTML table

### Where's Waldo? (Python)

- A convolutional neural network model that finds Waldo
- Trained on 18 images by highlighting Waldo in a square filled with 255, and filling 0 for areas outside the square

## EXPERIENCE

### Westchester Community College – Valhalla, NY

July 2017 to July 2018

Teaching Assistant: Data Structures in C++, Calculus, Physics

- Promoted deeper learning by providing individualized and small group support to reinforce classroom topics

### The Korean National Police Agency – Seoul, South Korea

July 2010 to May 2012

Auxiliary Police Officer

- Provided all policing services throughout the capital city of South Korea, Seoul