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EDUCATION

The University of Chicago, Chicago, IL

- *Master of Science, Computer Science* Expected, June 2024
- *Bachelor of Art, Computer Science and Art History* (GPA: 3.88/4.00) Expected, June 2024
- Courses and experiences: Computer Vision, Operating Systems, Distributed Systems, Unit/Integration Testing, Computer Security, CI/CD, Database, Discrete Math, Algorithms

SKILLS

Technical: Python, C, C++, Java, R, Linux, Git, Docker, Microsoft Suite
Language: Native Level in Chinese and English, Japanese Language Proficiency Test N1 Level

EXPERIENCES

MINIEYE, *Algorithm Engineer Intern*, Remote June 2021 – December 2021

- Developed an automatic calibration algorithm that calibrates four cameras of an around view monitor (AVM) system simultaneously in a natural driving situation in 5-10 minutes using **C++, Ceres Solver, Eigen**.
- Designed a program that converts fisheye images of the surrounding views of a vehicle into bird-eye images and extract lane markings using **OpenCV**.

Duunokid, *Associate IT Product Manager*, Remote April 2021 - December 2021

- Set up an **Amazon Web Services** server for the company, deployed the company's website onto the server, and set up its database using **MySQL**.
- Created 4 new pages for the company's website and update the website's contents weekly using **WordPress**.
- Designed the UI/UX interface of the website and mobile app with the software development team and the number of website visits has increased by **25%** since summer of 2021.

Undergraduate Economics Research Society, *Cohort Member*, Chicago, IL October 2019 – May 2020

- Conducted research on teenage addiction to e-cigarettes and its potential transition to traditional cigarettes using data from the United States' Centers for Disease Control and Prevention.
- Performed regression analysis on collected data using **R** and **Microsoft Excel** in order to observe significant connections between cigarette addiction and other behaviors.

TECHNICAL PROJECTS

Chiventure: Text-based Adventure Game Engine (C, WDL++)

- Documented and updated existing features of the game engine including RPG features and game authoring tools.
- Designed and implemented new mechanics for Non-Player Characters (NPCs), such as dialogue trees, skill trees, moving NPCs between rooms, and an interactive battle system between the player and NPCs.

Multi-user Chat Server (Python)

- Developed a Slack-like program using **ZeroMQ** messaging library that allows multiple users to send and receive messages from a server.
- Implemented publish-subscribe pattern and a channel feature, so a user can choose to only send messages and listen to a specific or all channels.

PintOS (C)

- Developed an operating system based on the original PintOS skeleton code with features including priority scheduling, a multi-level feedback queue scheduler, a system call handler, and an argument parser.
- Implemented standard OS functionalities, such as synchronization lock, multi-threading, physical and virtual memory mapping, and a file system.

Tweets Analyzing Program (Python)

- Implemented multiple algorithms to analyze a collection of tweets, such as finding a user's favorite hashtag and finding the most salient tokens in a document using *Term-frequency-inverse document frequency* statistic.

Image Processing Program (C)

- Implemented functionalities and algorithms that perform basic manipulations on PPM format images, such as creating negative, creating greyscale, and blurring.