Hojoung Jang

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EDUCATION

Purdue University *West Lafayette, Indiana*

Bachelor of Science in Computer Engineering *August 2018 – May 2021*

GPA: 3.7/4.0

EXPERIENCE

Google x Purdue: TensorFlow Model Garden *West Lafayette, Indiana*

Open Source Contributor *September 2020 – May 2021*

- Utilized existing open source codebase to re-implement You-Only-Look-Once (YOLOv1) object detection model
- Performed verification on TensorFlow re-implementation of YOLOv4 through benchmark comparison with the original
- Implemented a TensorFlow version of the original Darknet data preprocessing operations

Samsung Electronics *Seoul, South Korea*

Software Engineering Intern *June 2020 – August 2020*

- Built an end-to-end automatic speech recognition neural network with RNN Transducer architecture, TensorFlow and Python
- Converted LibriSpeech dataset to TFRecord format and implemented input data pipeline using TensorFlow API
- Experimented with varying model and training parameters to increase model accuracy

Continuous Analysis of Many Cameras: Embedded Vision Team *West Lafayette, Indiana*

Undergraduate Research Assistant *January 2020 – May 2020*

- Contributed to creating a neural network model that localizes and recognizes texts in natural scenes
- Implemented a data pipeline creating custom PyTorch dataset class
- Benchmarked several pre-trained text detectors (EAST) by running with our system code to evaluate if they are runnable on a Raspberry Pi in terms of accuracy and efficiency

Continuous Analysis of Many Cameras: Image Database Team *West Lafayette, Indiana*

Undergraduate Research Assistant *May 2019 – December 2019*

- Developed a real-time video feature indexing storage system that processes live streams from public IP cameras and allows user query for cameras with specific objects using Python
- Optimized the system to process and store images up to 108 frames-per-second with multiprocessing

PROJECTS

OpenAI Gym Xiangqi *January 2021 – May 2021*

- Created and open-sourced a Chinese Chess reinforcement learning environment using OpenAI Gym library and Python
- Implemented the game backend such as the game rules, procedures and integration with the graphical user interface
- Managed continuous integration (CI/CD) pipeline to perform software testing, build and publishing to public registry (PyPI)

Crypto Board *January 2020 – February 2020*

- Built an Android app that displays transaction history and order book of Bitcoin using Java and Bitstamp API
- Implemented a feature to notify users when the price drops below specified amount

Flappy Bird *November 2019 – December 2019*

- Implemented a Flappy Bird game box using STM32 microcontroller with a LED matrix as a display
- Interfaced a microcontroller using C programming language to manage its internal and external hardware peripherals

Interpreter & Compiler *October 2019 – December2019*

- Created a simplified clone of a programming language interpreter that converts bytecode into text instructions in C++
- Created a simplified clone of a compiler that converts text instructions into bytecode in Java (a counterpart to the interpreter)

SKILLS

Programming Languages:

C, C++, Java, Python, Go, MySQL

Frameworks/Technologies:

TensorFlow, Docker, Android, git