**Hsiang-Jui Lin**

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## Academic Record

**2012-2016** *National Taiwan University, Bachelor of Computer Science and Information Engineering*

**2017-2021** *National Taiwan University, Master of Computer Science and Information Engineering*
Tasks: *System Programming* course TA (2016-2017)

## Work Experience

**2010 - 2016** **Software Developer at CAVEDU教育團隊**
Tasks: AppInventor project, Author of LeJOS tutorial book

**2016 Jul. - 2017 Jul.** **Substitute Military Service at 臺灣盲人重建院**
Tasks: General affairs, develop automatic official documents image to text

**2018 Jun. - 2019 Jun.** **R&D Assistant at Microsoft Taiwan**
Tasks: Bing's Reverse Geocoder backend development

## Projects and Publications

**Author of *機器人程式設計與實作：使用 Java* book (2013)**
A book introduces leJOS (http://www.lejos.org/) framework on LEGO NXT robots.
ISBN: 9789862768228
(http://isbn.ncl.edu.tw/NCL_ISBNNet/main_DisplayRecord.php?PHPSESSID=c8kchinqo5ncq873i47c4sqkb0&Pact=Display&Pstart=1)

**MIT AppInventor project (2016 - 2018)**
Task: Focus on robotic related features WYSIWYG Android programming
Developed Lego EV3 (link (https://github.com/mit-cml/appinventor-sources/pull/729)) and MediaTek MT7697 link (https://github.com/mit-cml/appinventor-extensions/pull/12) features.

**Undergraduate study on graph theory (2016)**
The study focuses on total and paired domination problems on distance-hereditary graph. Discovered an alternative optimal solution to total domination based on split decomposition. The handout can be found in the link (https://drive.google.com/file/d/18H1fvSZ7td3vArSJaeoTKkLjJ-DqApaP/view?usp=sharing).

**TorFS (2019)**
It's a side project that exploits free storage from Tor's Onion service.
We successfully built a virtual file system that stores data blocks into RSA public keys, and distributed them to the rest of Onoin network.
The repository can be found in the link (https://github.com/jerry73204/cns-final-tor-store).

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| **Hacky Arm (2020)** | A side project to design a robotic arm capable of grabbing objects using RealSense. It combines computer vision and position estimation of objects using Intel RealSense depth camera, and instructs the arm to grab objects accordingly.<br>The repository can be found in the link (https://github.com/jerry73204/hacky-arm). |
| **Wayside (2019-2021)** | The lab project develops a complete data processing system for Taiwanese traffic scenes. The tasks conver the data collection, sensor hardware design, data format design and pipelining and data analysis. It aims to combine the data from cameras and LiDARs, and develop fusing algorithms to get the best of the both sensors.<br>The reference information can be found in the page (https://newslabntu.github.io/DanielFolio/projects/3_project/). |
| **typ (2020)** | A side project to develop the type level programming language for Rust.<br>It achieves compile-time, type-level arithmetic computations. It was developed to pave the way for building type-safe tensor types in Rust. The repository can be found in the link (https://github.com/jerry73204/typ). |
| **par-stream (2020)** | A side project to develop building blocks of asynchronous parallel stream for Rust. It provides high-level stream types with parallelism and asynchronous programming in mind. The repository can be found in the link (https://github.com/jerry73204/par-stream). |

## Honors & Awards

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| **104 年金盾獎 2nd place (2015)** | Reference 行政院國家資通安全會報 (https://www.nicst.ey.gov.tw/News_Content4.aspx?n=11EC3BA2351F93AA&sms=4D833E26864BB926&s=60F37FB45AC653BD) |
| **102 年金盾獎 潛力無窮獎 (2013)** | Reference Web archive for official site (https://web.archive.org/web/20140321005458/http://security.cisanet.org.tw:80/?i=3&mc=302) |