Yu-Jen Lai (Ian)　賴裕仁

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Objective

Seek a web-based engineering position engaged with network technology, e.g. backend engineer.

Skills

- **Programming:**　Java, Android, Python, C, C++, Shell Script, MATLAB, SQLite
- **Network:**　Wi-Fi, TCP/IP, Wireshark, NS2, EXata
- **System & Tools:**　AWS EC2, Heroku, Git, Cloud9, OpenStack, Vagrant, VirtualBox, Linux, Bash
- **Web – Frontend:**　HTML, CSS, Bootstrap, JavaScript, jQuery
- **Web – Backend:**　Node.js, Express, MongoDB, MySQL
- **Language:**　Mandarin, English, Japanese (N1), Taiwanese

Working Experiences

Technical consultant　　Flash Storage Strategy Department, Toshiba Memory Corporation @ Japan　　2017.07 – Present

- Develop and implement go-to-market strategy for NVMeoF storage software targeting data centers, with a projected value of 60 M USD in revenue within two years
  - Coordinate cross-functional teams to identify potential system partners and customers, translate insight into product development and PoC evaluation, and receive customer buy-in.
  - Develop commercialization plan including pricing, support, trademark/legal matters, and product launching.
  - Establish and present the demo system in exhibitions to educate the users on the architecture, configuration and operation of the software for customer's PoC evaluation.

Software Research Engineer　　Memory Research Center, Toshiba Memory Corporation @ Japan　　2013.11 – 2017.07

- Workload analysis for NVM (non-volatile memory) [1 yr]
  - Build benchmark toolkit based on NVM Library; benchmark the performance in application layer, e.g. RDBMS, NoSQL database, and the proprietary toolkit, with different memory access paths.
- Multicast-Multihop-based Wi-Fi content sharing platform [2.5 yr]
  - Design and implement a platform for content sharing on both single board computer and Android phone.
  - Identify and pitch to strategic partners for joint R&D and scope out economic model for commercialization.
  - Publish patterns and academic papers.

Software Engineer　　Android Mobile, ASUS Computer Inc. @ Taiwan　　2012.11 – 2013.10

- Design, implement, test, debug, port features for webkit-based stock browser of Android.
- Design, implement, test, debug, port features for wireless settings of Android, e.g. Wi-Fi, Bluetooth, Wi-Fi Direct and hotspot tethering for various platforms including Qualcomm, MTK, and Intel.

Special Research Student　　Asami & Kawahara Lab, The University of Tokyo @ Japan　　2010.10 – 2011.09

- Wireless communication protocols for high speed trains
  - Targeting to construct a wireless communication system for bullet-train (Shinkansen) collaborating with Central Japan Railway Company, I conducted behavior analysis of TCP/UDP traffics, designed and implemented the emulator for the high-speed environment.

Research Assistant　　Wireless Mobile Network Lab, National Taiwan University @ Taiwan　　2008.10 – 2010.09

- Accelerometer-assisted adaptive 802.11 for public transportation system
  - Lead a project to design and implement a system utilizing train's acceleration info to enhance rate adaptation, conducted experiments on Taipei MRT to test the performance; it results in throughput gain and energy save.

Educations

- M.S. in Electrical Engineering graduate institute, National Taiwan University (Wireless Mobile Network Lab) 2008.09 - 2011.09
- Special Research Student in The University of Tokyo (Asami Kawahara Lab) 2010.09 - 2011.08
- B.S. in Electrical Engineering, National Taiwan University 2004.09 - 2008.06

Coding Side Projects

Project 1 : Color Guessing Game	A pure frontend game (no network needed). The app gives a RGB value and let the user guess the corresponding color. The user receives the final score according to the remaining time and the correct ratio.	**Frontend:** HTML, CSS, JavaScript **Deploy:** GitHub Pages **URL:** https://ianlai.github.io/ **GitHub:** https://github.com/ianlai/ianlai.github.io
Project 2: Taiwan Spot	Server-side rendering website (Full-Stack). The website lets users register an account and then send a post to introduce a visiting spot. Other users can comment on the posts. The posts and comments can be edited or deleted by the user who owns them. The website supports responsive design, so different screen sizes can have their suitable views.	**Frontend:** HTML, CSS, JavaScript, Bootstrap **Backend:** Node.js, Express, MongoDB **Deploy:** Heroku, mLab **URL:** https://taiwanspots.herokuapp.com/ **GitHub:** https://github.com/ianlai/taiwan-spots
Project 3: Ajax Todo List	Client-side rendering single page app (Full-Stack). The user can add, toggle status, and delete a todo event in a single web page without reload. The server hosts the entry page and the Rest APIs. Once the entry page is loaded, the client sends Ajax request to the APIs to retrieve the data in the database and render the page with JSON response.	**Frontend:** HTML, CSS, JavaScript, jQuery, Ajax **Backend:** Node.js, Express, MongoDB **Deploy:** Heroku, mLab **URL:** http://ajaxtodolist.herokuapp.com/ **GitHub:** https://github.com/ianlai/ajax-todo-list
Project 4: Java Coding	To polish the skills of common algorithm and data structure with Java, I create a repository contains over 200 java examples which covers the topics including linked list, tree, math, string, sorting, dynamic programming, backtracking etc. Besides, it also contains some experiment results, e.g., performance comparison of different sorting schemes, comparison of different sizes of the array of a hash map.	**Language** Java **GitHub:** https://github.com/ianlai/Note-Java

Publications

- **Yu-Jen Lai**, Youyang Ng, Takeshi Sakoda, Yosuke Bando, Arata Miyamoto, Masahiro Ishiyama, Ken-ichi Maeda, Yusuke Doi, "Real and Simulator Testbeds for Content Dissemination in High-density Large-scale WANET", IEEE Consumer Communications & Networking Conference (CCNC), January 2017 2017.01
- **Yu-Jen Lai**, Wei-Hao Kuo, Wan-Ting Chiu, Hung-Yu Wei, "Accelerometer-Assisted 802.11 Rate Adaptation on Mobile WiFi Access", EURASIP Journal on Wireless Communications and Networking, August 2012 2012.08
- Kazuto Shimizu, **Yu-Jen Lai**, Kazuhiro Yamada, Yoshihiro Kawahara, and Tohru Asami, "Design and Evaluation of an Emulator for High Speed Mobile Communication Environment Based on IEEE 802.11g", Technical Report of IEICE (Japanese), March 2011 2011.03
- **Yu-Jen Lai**, Wei-Hao Kuo, Wan-Ting Chiu, Shao-Ting Chang, Hung-Yu Wei, "Accelerometer-Assisted 802.11 Rate Adaptation on Mass Rapid Transit System", ACM SIGCOMM (poster), August 2010 2010.08