## Yu-wen Pwu

#### Student at Department of Computer Science, National Chiao Tung University

☑ Email: ywpu@cs.nctu.edu.tw Blog: http://blog.ywpu.me/

GitHub: https://github.com/yuwen41200

Linkedin: https://tw.linkedin.com/in/yuwen41200

#### **SUMMARY**

An undergraduate student majoring in computer science.

Enthusiastic about web programming, GNU/Linux, and open source movement.

Developing with HTML, CSS, JavaScript, C/C++, Java, PHP, and MySQL.

Also interested in interdisciplinary studies of philosophy, sociology, and political science.

#### **EDUCATION**

## **National Chiao Tung University**

2014 - 2018

Computer Science, Bachelor of Science, Overall Grade: Top 13.73%

The College of Computer Science in National Chiao Tung University is one of the best academic computer science departments in Taiwan.

### Taipei Municipal Chienkuo High School

2011 - 2014

General Studies of Day Division, High School Certificate

Taipei Municipal Chienkuo High School is one of the most prestigious high schools in Taiwan.

- SKILLS Front-end Engineering
  - HTML5
  - o CSS3
  - Less
  - Responsive Web Design
  - Bootstrap
  - o Semantic UI
  - JavaScript
  - jQuery
  - o AJAX
  - Software Development
    - Java SE 8
    - Gradle
    - o C/C++
    - Fundamental Data Structures and Algorithms
  - Digital Integrated Circuits
    - RTL Design
    - Verilog
    - o FPGAs

- · Web Development
  - PHP
  - Laravel
  - o MVC Design Pattern
  - Relational Databases
  - Linux Servers
  - Open Source Softwares
  - Apache HTTP Server
  - Postfix
  - Git
- Parallel Programming
  - Pthread
  - OpenMP
  - MPI
  - CUDA
  - o OpenCL
- · Languages
  - Chinese (Native or Bilingual Proficiency)
  - English (Professional Working Proficiency)
  - Japanese (Elementary Proficiency)

#### AWARDS

# **Application Design Contest, 2nd Place Application Design Contest, 3rd Place**

September 2015 September 2014

National Chiao Tung University Information Technology Services Center

A web application development contest that requires a team to design and implement a designated application within a limited time.

#### **Academic Achievement Award**

April 2015

National Chiao Tung University

The Academic Achievement Award entitles to the students at the top five percent or the top three students in the class each semester.

#### **PUBLICATIONS**

#### **Parallel Video Processing**

January 2016

https://github.com/sunset1995/parallel\_analysis/raw/v1.2.4/report.pdf Authors: Cheng Sun, Jasmine Chen, Yu-wen Pwu

Video processing typically requires immense amounts of computational resources. Devices supporting up to 4K resolution are currently hitting the market by storm. A greater demand for computation has thus arisen. Therefore, we set out to explore ways to boost the efficiency of video processing through a series of experiments. These experiments were conducted with a wide assortment of tools (or APIs) on multiple platforms. We have managed to achieve what we consider maximum possible speedups on our test platforms.

A project for the Parallel Programming (Fall 2015) course in National Chiao Tung University. Special thanks to Prof. Yi-ping You, Assistant Professor at Department of Computer Science, and Prof. Chun-jen Tsai, Associate Professor at Department of Computer Science.

#### Complete source code is publicly available on GitHub:

https://github.com/sunset1995/parallel\_analysis https://github.com/yuwen41200/fpga-computing

#### **Web Design Tutorial**

January 2015

http://blog.ywpu.me/ · Author: Yu-wen Pwu

A comprehensive tutorial about web design.

Originally published as handouts for the web design lectures offered in Chienkuo High School Electronic Industrial Study Club in 2012.

#### **PROJECTS**

## **Open Data and Data Visualization**

October 2015

http://ywpu.me/meichu-hack-2015

Authors: Cheng Sun, Kuang-lin Pan, Yong-zhan Hong, Yu-wen Pwu, Zi-qi Lin

Career development analyses for Taiwan high school graduates.

A project for Meichu Hackathon 2015.

Complete source code is publicly available on GitHub:

https://github.com/yuwen41200/meichu-hack-2015

#### Website of C.K. High School Graduation Ceremony

http://www.ck.tp.edu.tw/~gra2014/ · Authors: Chia-sheng Chen, Yu-wen Pwu

The official website for our high school commencement in 2014.

We have tried a lot of new things to build this site, including HTML5, CSS3, JavaScript, jQuery, SVG SMIL, XML DOM, Closure Compiler, and responsive web design (using Bootstrap). We use GIMP, Adobe Illustrator, Inkscape, Libav to revise images and videos. Linux is our development platform. We collaborate and synchronize our code on GitHub.

All images, films, and articles on the site are authored by members from Taipei Municipal Chienkuo High School 66th Graduation Ceremony Organizing Committee. We greatly appreciate their contributions.

#### Complete source code is publicly available on GitHub:

https://github.com/qitar888/grad66th

#### **VOLUNTEERING Team Mentor**

August 2015

Students' Information Technology Conference Camp 2015 · Science and Technology

Students' Information Technology Conference (SITCON) is a free and open source community founded by students in Taiwan.

#### **General Services Staff**

November 2014

gov Summit 2014 · Civil Rights and Social Action

gov.tw is a community in Taiwan dedicated to using information technology to promote information transparency and democratic government.

#### **ORGANIZATIONS** National Chiao Tung University Students' Union

Member of Division of Information Technology · September 2015 – September 2016

#### National Chiao Tung University Computer Science Students' Union

Member of Division of Public Relations · June 2015 – June 2016

#### Taipei Municipal Chienkuo High School Electronic Industrial Study Club

Vice President · June 2012 – June 2013

#### COURSES **National Chiao Tung University**

- Intro. to Computers and Programming
- Digital Circuit Design
- Data Structures
- Intro. to Computer Networks
- Intro. to Algorithms
- Intro. to Computer Security
- Object-oriented Programming
- Java Programming
- Digital Circuit Lab.
- Parallel Programming
- · Computer Organization
- Intro. to Database Systems

#### **National Tsing Hua University**

· Intro. to Sociology

· Central Problems in Philosophy

#### **Conferences**

- · Conference for Open Source Coders, Users and Promoters (COSCUP) 2014
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- Students' Information Technology Conference (SITCON) 2013