

Yu-Wen Pu 蒲郁文

I enjoy interdisciplinary learning and have taken courses in **computer science** and **social sciences**. I have some experience in **software development** and **user experience design**. I am interested in **designing digital services for communities** and **studying the relation between digital technology and civil society** using **empirical methods**.

🏠 Website: <http://ywpu.me/> ✉ Email: ywpu@cs.nctu.edu.tw 🔗 Linkedin: <https://linkedin.com/in/ywpu>

EXPERIENCE

Research Assistant Mar. 2019 – July 2019
National Center for High-performance Computing, National Applied Research Labs

Summer Intern July 2018 – Aug. 2018
National Center for High-performance Computing, National Applied Research Labs

Summer Student – IT Staff July 2017 – Aug. 2017
Tainan Manufacturing Center, Applied Materials Taiwan

Summer Intern July 2016 – Aug. 2016
Institute of Information Science, Academia Sinica

EDUCATION


Master of Science (M.S.) in Computer Science Sept. 2018 – Feb. 2021
National Yang Ming Chiao Tung University (formerly National Chiao Tung University)

Program of Cultural Studies (with a Focus on Sociology) Sept. 2018 – Feb. 2021
National Yang Ming Chiao Tung University (formerly National Chiao Tung University)


Bachelor of Science (B.S.) in Computer Science Sept. 2014 – June 2018
National Chiao Tung University, Class Rank: 5 out of 50

SKILLS

Web technologies: HTML, CSS, JavaScript, PHP, SQL 

User experience design/research: interview, prototype, usability test 

Data (text) analysis and visualization: Python, R 

Information society studies (using empirical methods) 

FEATURED PROJECTS

Designing an Interactive Interface That Facilitates Public Deliberation Based on Social Relations Mar. 2021

- Conducted interviews to identify design directions of public deliberation technologies
- Developed an interactive prototype with HTML5, CSS3, RWD, Bootstrap, JavaScript, jQuery, Ajax, PHP, SQL, LAMP stack, Git, Google Cloud, SendGrid
- Conducted an online discussion experiment to evaluate the efficacy and user experi-

ence of the proposed design (similar to an A/B test)

🔗 <http://ywpu.me/PDTD.pdf>

👤 Yu-Wen Pu (Advisors: Prof. Chuen-Tsai Sun, Prof. Yu-Sheng Lin)

Designing Culture Weaver, a Mobile Application for Preserving and Curating Local Culture and History, Through User-Centered Design Processes Jan. 2020

- Worked with teammates to define a design problem, conduct stakeholder interviews, identify design requirements, create personas and scenarios, create wireframes, create mockups and prototypes with Figma, and conduct usability tests for design iterations

🔗 <http://ywpu.me/ucd>

👤 Hsin-Ju Lee, Kuan-Ying Wu, Shang-Hsuan Yang, Yen-Chun Lin, Yu-Wen Pu

Using Big Data to Analyze Gender Differences in Attitudes Toward Air Pollution Issues July 2019

- Studied and practiced text mining methods with R and tidyverse; helped refine a [text mining book](#) while studying
- Performed data collection, data cleaning, word segmentation, keyword extraction, topic extraction (document clustering), and sentiment analysis with Python, SciPy, R, and tidyverse

🏠 A project at National Applied Research Laboratories

👤 Yu-Wen Pu (Principal investigator: Dr. Chia-Lee Yang)

Researching the User Experience of Gongqibubei, a Mobile Application for Learning English June 2019

- Worked with teammates and Hopenglish (the company behind Gongqibubei) to create an interaction map of the product; conduct user interviews, comparative (competitive) analysis, a survey, heuristic evaluations, and usability tests for the product

🔗 <https://youtu.be/LrPDHAKus1g>

👤 Bo-Xun Yu, Hsin-Yu Yao, Kuan-Ying Wu, Meng-Hsuan Tsai, Yu-Wen Pu

Analysis of Political Activities on Social Networking Sites Dec. 2017

- Performed data collection, pre-processing, word segmentation, keyword/event extraction, document classification (positive or negative campaigning), and social network analysis with Python, Gephi, and PHP
- Produced the report, poster, and slides using LaTeX

🔗 <http://ywpu.me/APASNS.pdf>

👤 Yu-Wen Pu (Advisor: Prof. Chuen-Tsai Sun)

Designing and Developing a Web Client for a Production Monitoring System Aug. 2017

- Worked with manufacturing engineers and managers to build a web app that can visualize real-time fab status, query data, post announcements, and control access according to user's privilege level
- Languages/tools/methods used: HTML5, CSS3, RWD, Bootstrap, JavaScript (including Canvas API), jQuery, Ajax, PHP, Laravel, MVC design pattern, SQL, IIS, Composer, Git

🏠 A project at Applied Materials Manufacturing Center

Designing and Developing a Biodiversity Analysis Application

Aug. 2016

- Collaborated with Yun-Chih to build a GUI app that can import species occurrence datasets, visualize the spatial/temporal distribution of species, calculate the spatial/temporal relation between species, and find out the co-occurrences of species
- Languages/tools/methods used: Python, SciPy, Qt (via PyQt), Leaflet (via Folium), MVC design pattern, RST & Sphinx for documentation, multithreading & multiprocessing for better performance, Git, Linux

🔗 <https://github.com/yuwen41200/biodiversity-analysis>

👤 Yu-Wen Pu, Yun-Chih Chen (Advisor: Dr. Tyng-Ruey Chuang)

* Collaborators are listed in alphabetical order.

OTHER PROJECTS

Exploring the Design Possibilities in Extended Reality

June 2020

- Created a 360° interactive film and a VR rhythm game with programmers, a 2D/3D artist, and a sound designer
- I participated in screenwriting (360° film only) and Unity programming (using C# and HTC Vive)

🔗 <http://ywpu.me/d/vr360> (360° film)

👤 Chun-Yu Huang, Hsiang-Chin Li, Kuan-Chun Hung (VR game only), Pei-Wen Yeh (360° film only), Wen-Yin Chang (VR game only), Yu-Wen Pu

Automatic Topic Analysis of Facebook Posts

Jan. 2018

- Collaborated with teammates to analyze the posts on a Facebook Page that functioned as a student complaint platform
- Performed data collection, pre-processing, word segmentation, topic extraction (document clustering), and visualization with Python, SciPy, and scikit-learn

🔗 <http://ywpu.me/d/tafp.pdf>

👤 Claire Meng-Hsuan Tsai, Jody Feng-Wen Ho, Yu-Wen Pu

Generating Movie Titles from Subtitles Automatically

Jan. 2018

- Collaborated with teammates to experiment with movie title generation and evaluation methods (for movie titles and subtitles in Chinese)
- Languages/tools used: Python, natural language processing (NLP) toolkits

🔗 <http://ywpu.me/d/mtg.pdf>

👤 Hui-Chung Li, Hsuan-Ming Chang, Mien-Chung Chiu, Yu-Wen Pu

Building an LED Cube with a Microcontroller

Jan. 2017

- Made a 5x5x5 LED cube that can display 3D animations and adjust animation speed according to audience's distance
- We used an ARM-based microcontroller, an ultrasonic sensor, shift registers, and several other electronic components
- I was in charge of the software part; I studied datasheets and wrote C programs to control the electronics

🔗 <https://youtu.be/0f-6uI6oZSM>

Parallelizing Video Processing Programs

Jan. 2016

- In charge of an FPGA heterogeneous computing experiment that evaluated the speed-up of CPU multithreading, GPGPU computing, and FPGA computing
- Languages/tools used: Verilog (for FPGA), C++ (including C++11 thread library), OpenMP, Linux; CUDA programs were written by Jasmine

🔗 <http://ywpu.me/d/pvp> (the FPGA experiment section)

👤 Cheng Sun, Jasmine Chen, Yu-Wen Pu

Developing Websites for a High School Computer Club

July 2015

- Designed and developed the official website of Chienkuo High School Electronic Industrial Study Club and websites of camps organized by the Club
- Functions I have implemented: create, read, update, and delete contents; upload, download, list, and remove files; log in and log out; send emails
- Applications: announcement platforms, web forums, learning materials management systems, event registration platforms, contact forms
- Languages/tools/methods used: HTML5, CSS3, RWD, Semantic UI, JavaScript, jQuery, PHP, MVC design pattern, SQL, LAMP stack, Git

🔗 <https://github.com/yuwen41200/ada-camp-2015> (one of the camp websites)

👤 Yu-Wen Pu

Developing a Calendar Application

June 2015

- Built a GUI app that can manage events, show monthly/daily schedules, and import events from Google Calendar
- Languages/tools/methods used: Java, Gradle, Javadoc, MySQL, Google Calendar API, MVC design pattern, Git

🔗 <https://github.com/yuwen41200/personal-calendar>

👤 Yu-Wen Pu

Giving Tutorials on Web Development

Jan. 2015

- Served as Vice President and Web Development Tutor at Chienkuo High School Electronic Industrial Study Club from 2012 to 2013
- Also wrote handouts on web development during that time; created an online version of my handouts in 2015 (see the link below)

🔗 <http://blog.ywpu.me/> (handouts)

👤 Yu-Wen Pu

Designing and Developing a Graduation Ceremony Website

May 2014

- Collaborated with Chia-Sheng and coordinated with other Organizing Committee members to build the official website of our high school commencement
- Languages/tools used: HTML5, CSS3, RWD, Bootstrap, JavaScript, jQuery, SVG SMIL, Google Maps API, Closure Compiler, Git, Linux

🔗 <http://ywpu.me/ckhsgrad>

👤 Chia-Sheng Chen, Yu-Wen Pu

* Collaborators are listed in alphabetical order.

AWARDS

Undergraduate Research Competition, Honorable Mention

Dec. 2017

- My research project “Analysis of Political Activities on Social Networking Sites” received an honorable mention; see Featured Projects for more details

 Department of Computer Science, National Chiao Tung University

 Yu-Wen Pu (Advisor: Prof. Chuen-Tsai Sun)

Application Design Contest, 2nd Place

Sept. 2015

- A full-stack web development contest that required teams to design and implement a web application according to a given specification within a limited time

 Information Technology Services Center, National Chiao Tung University

 Chia-An Li, Chih-Peng Chang, Ying-Hsiang Chang, Yu-Wen Pu

Academic Achievement Award

Apr. 2015

- I ranked first in a class of 48 in the Fall 2014 semester

 National Chiao Tung University

 Yu-Wen Pu

Application Design Contest, 3rd Place

Sept. 2014

- A full-stack web development contest that required teams to design and implement a web application according to a given specification within a limited time

 Information Technology Services Center, National Chiao Tung University

 Chun-Kai Chen, Feng-Chin Wu, Tsung-En Hsiao, Yu-Wen Pu

* Collaborators are listed in alphabetical order.