

Rong-Ching Chang

rocchang@ucdavis.edu | +1(430)-280-0881

<https://annabechang.github.io> | <https://github.com/annabechang>

<https://www.linkedin.com/in/rong-ching-chang>

RESEARCH INTEREST

Graph Neural Networks, Knowledge Graphs, NLP, Social Media Data mining,
Multimodal Data Fusion

EDUCATION

University of California, Davis Sep. 2021 - Present
Ph.D. in Computer Science
Advisor: Prof. Zubair Shafiq, Magdalena Wojcieszak

Tunghai University, Taichung, Taiwan Sep. 2019 – June 2021
M.Sc. in Computer Science GPA: 3.98/ 4.30
Advisor: Prof. Chu-Hsing Lin

The University of California San Diego, CA, United States Sep. 2018 - Present
MicroMasters in Algorithms and Data Structures
Course: Data Structures Fundamentals, Algorithmic Design, and Techniques, Graph Algorithms

Chung Yuan Christian University, Taoyuan, Taiwan June 2014 - June 2017
B.A., in Finance GPA: 3.88 / 4.0
Advisor: Prof. Yi-Pei Chen
Academic Excellence Award, Excellent Professional Subjects Award

Middle Tennessee State University, TN, United States Sep. 2015 - May 2016
International Exchange Program GPA: 3.63 / 4.0

JOURNAL PAPERS

[Entropy-Based Time Window Features Extraction for Machine Learning to Predict Acute Kidney Injury in ICU](#)

Chun-Te Huang, **Rong-Ching Chang**, Yi-Lu Tsai, Kai-Chih Pai, Tsai-Jung Wang, Chia-Tien Hsu, Cheng-Hsu Chen, Chien-Chung Huang, Min-Shian Wang, Lun-Chi Chen, Ruey-Kai Sheu, Chieh-Liang Wu, Chun-Ming Lai
Applied Sciences. 2021; 11(14):6364. <https://doi.org/10.3390/app11146364>

CONFERENCE PAPERS

[Dataset of Propaganda Techniques of the State-Sponsored Information Operation of the People's Republic of China](#)

Rong-Ching Chang, Chun-Ming Lai, Kai-Lai Chang, Chu-Hsing Lin
Misinformation and Misbehavior Mining on the Web with International Conference on Knowledge Discovery & Data Mining (KDD) 2021

[Online Sentiment And Post Reactions On Facebook: Leading Indicator For State-Level Covid-19 Confirmed Cases](#)

Rong-Ching Chang, Chun-Ming Lai, Chu-Hsing Lin, Kai-Chih Pai

AI for Public Health workshop at the International Conference on Learning Representations (ICLR), 2021

[Online Sentiment on Facebook: a Leading Indicator for State-Level Covid-19 Confirm Cases](#)

Rong-Ching Chang, Chu-Hsing Lin, Chun-Ming Lai, Kai-Chih Pai

International Conference On Information Technologies and Practices, 2021

[Detecting Propaganda on the Sentence Level during the COVID-19 Pandemic](#)

Rong-Ching Chang, Chu-Hsing Lin

Cryptology and Information Security Conference (CISC), 2020.

[Pandemic Response and Crisis Informatics: An Imperative for Public Health Messaging](#)

Chun-Ming Lai, Yi-Chen Liu, **Rong-Ching Chang**, Jon W. Chapman, and Chu-Hsing Lin

International Computer Symposium (ICS), 2020.

[Leveraging Top Participants Networks Topology to Identify Suspiciously Manipulated Posts](#)

Chun-Ming Lai, Huan-Chieh Tseng, **Rong-Ching Chang**, Tzer-Shyong Chen, Kai-Chih Pai

National Conference on Science and Technology of National Defense. 2020.

[An Attribute-based Encryption for Cloud Medical Data Sharing and Its Implementation](#)

Chu-Hsing Lin, Chu-I Wu, Chia-Yuan Cheng, **Rong-Ching Chang**

The Symposium on Digital Life Technologies 2020 (DLT 2020).

[Unconnected searchable encryption and implementation for cloud medical record services](#)

適合於雲端病歷服務的無連結性可搜尋加密與實作

Chu-Hsing Lin, Yuan-Xiang Chi, Xuan-Jie Wang, **Rong-Ching Chang**

The Symposium on Digital Life Technologies 2020 (DLT 2020).

WORKING PAPERS

Metrics and Analysis of Polarization and Echo Chamber on YouTube Videos

Understanding User Ideology Exposure Shifts and Causal Relationships on YouTube Video and News

TALKS

Is a Twitter user's location correlated with their opinion on #COVID-19?

Rong-Ching Chang, Chun-Ming Lai

PyData Taipei. 2020.

RESEARCH EXPERIENCE

Information Security Lab, Tunghai University

AI + HI smart critical care diagnosis and treatment system and a new model of inter-hospital practice

Advisor: Prof. Chun-Ming Lai

Dec. 2020 - June 2021

Funder: The Ministry of Science and Technology, Taiwan

NO: MOST 109-2321-B-075A-001

- Conducting research publications

Defense Methods against Co-Resident Attack of Cloud Security and Proprietary Mechanisms in Medical Applications

Advisor: Prof. Chu-Hsing Lin

Sep. 2019 - June 2021

Funder: The Ministry of Science and Technology, Taiwan

NO: MOST107-2221-E-029-005-MY3.

- Assisting with several research publications

Suspicious Account Operation and Applied Tactics in National Events on Social Media

Advisors: Prof. Chu-Hsing Lin, Chun-Ming Lai

Nov. 2020 – Dec. 2020

- Writing research proposal and designing research pipeline
- The proposal was granted from The Ministry of Science and Technology, Taiwan, with project number of MOST 110-2221-E-029-012

Smart Aquatic Plant: Giving the aquatic plant what it needs

Advisors: Prof. Chao-Tung Yang

Nov. 2020 – Jan. 2021

- Designing and making aquatic plant monitoring system using Arduino

Chung Yuan Christian University

The Effects of Family-Owned Business and the Initial Public Offerings System on Market Liquidity

Advisor: Prof. Yi-Pei Chen

July 2015 - Feb 2016

Funder: The Ministry of Science and Technology, Taiwan

NO: 104CFD0500082

- Our models showed IPO pricing has a positive effect on market liquidity in new IPO system.

PROFESSIONAL EXPERIENCE

Industrial Technology Research Institute

Hsinchu, Taiwan

AI Research Intern, Computational Intelligence Technology

Jan. 2020 – Aug. 2020

- Researched and tested papers focused on AutoML frameworks, automatic forecasting of time series, global supply chain management, inventory management
- Tested AutoML packages including AutoKeras, Hyperas with docker, GPU, Tensorflow, and Pytorch on various tasks.

Factor Bike

Taichung, Taiwan

Full Stack Web Developer Intern

Jan. 2019 – Apr. 2019

- Developed Shopify online store

J.P. Instruments

CA, United States

UX/UI Intern

July 2017 – Dec. 2017

- Developed app design

Doctor Diet Inc.

Nashville, TN, United States

Finance Manager Intern

May 2016 – Sep. 2016

- Developed semi-automated system for daily sales statements, cash flow tracking for 14 clinics

REVIEWER FOR JOURNALS & CONFERENCES

- Scientific Report, Nature

CERTIFICATE

- Microsoft Certified: Azure AI Fundamentals
- Nvidia: Combining Data Types through an Image Captioning Project

HONORS & AWARDS

- National Planning College Student Innovation Contest Finalist Award, Taiwan Business Strategy Association
- Times Young Creative Finalist Award (top 1% from thousands of competitors from China and Taiwan)

LEADERSHIP EXPERIENCE

President, Photography Club, Chung Yuan Christian University, Taoyuan, Taiwan

May 2014 – May 2015

Doubled membership to 200; Recognized with an award for Excellent Art Club; best achievement since club establishment.

SKILLS

- Computer
SQL, Git, Docker, REST API, HTML, R, C, Java, Bash, AWS, Arduino, Jupyter, Python: sklearn, fast.ai, Pandas, TensorFlow, Keras, Pytorch, DGL, Hugging Face, Networkx
- Language
English, Mandarin

PROFESSIONAL DEVELOPMENTS

Python for Financial Analysis and Algorithmic Trading, Intro to Fintech, Knowledge Graphs, Probabilistic Graphical Models: Representation, Graph Algorithms in Genome Sequencing, Dynamic Programming: Applications in Machine Learning and Genomics, NP-Complete Problems, String Processing, and Pattern Matching Algorithms