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).

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

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

Propaganda Detection during COVID-19

Advisor: Prof. Chu-Hsing Lin   May. 2020 – Aug. 2020

- Used BERT on transfer learning task in fast and first level propaganda detection
- The result showed notable differences both in account behavior and their texted content.

Leveraging Participant Network Topology to Identify Suspiciously Manipulated Posts

Advisor: Prof. S. Felix Wu, Chun-Ming Lai, Kai-Chih Pai   Sep. 2019 – Sep. 2020

- Identifying suspicious accounts and posts using domain and first N participants

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 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