I-Sheng (Eason) Chen

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EDUCATION

2023 – 2028 (Excepted)
PhD in Human-Computer Interaction Institute, School of Computer Science
Carnegie Mellon University, Pittsburgh, PA, United States
- Advisor: Ken Koedinger
- Research in Learning Sciences, Education Technologies, and Learning Analytics

2018 – 2023
Bachelor of Information Science
National Taiwan Normal University, Taipei, Taiwan
- Major in Learning Sciences (learn how to learn)
- GPA 4.12 / 4.3 (or 3.94 / 4.0)

WORK EXPERIENCE

2023 Summer
Researcher
Bucket Protocol, Full-time, Taiwan
- Assisted in building the biggest Collateralized Debt Position (CDP) protocol on Sui Network
- Developed GPTutor, a ChatGPT-powered programming tool for smart contract code explain. Awarded a 50k grant from the Sui Foundation, and result presented at AIED'23 and CSCW'23
- Led the Bucket Raffle System project, securing 1st place at Sui Builder House with 10k prize

2022 - 2023
R&D Engineer
Cohart.com, Part-time, San Francisco Bay Area (Remote)
- Research on Non-fungible token (NFT) Solutions for Art Creators
- Work on NFT and Marketplace which features Lazy-Minting and Royalty Management
- Educate colleagues on developing secure and user friendly Blockchain applications
- Co-work remotely with teammates from US, Vietnam, Malaysia, Pakistan, and Türkiye

2019 - 2022
R&D Engineer
FiO.one, Part-time, Taipei, Taiwan
- Optimized Blockchain application performance with Merkle Tree, results are patent pending
- Built Blockchain Applications with Decentralized Identity in Education on Ethereum and IOTA
- Implemented secure and lightweight on-chain data authentication process on the product

RESEARCH EXPERIENCE

2019 - 2023
Research Assistant (with 8 professors)
National Taiwan Normal University & National Taiwan University, Taipei, Taiwan
- Researched how users produce creative idea online collaboratively, results to Q1 SSCI journal
- Built NLP chatbots with emotional and empathetic conversational abilities by GPT-2
- Designed integrated data transfer pipeline by Google Cloud APIs, MongoDB, and Pandas

2021 - 2022	**Undergraduate Research Project Principal Investigator**
	Ministry of Science and Technology, Taipei, Taiwan

- Researched Building Natural Language Generation Chatbots which feature multiple-replies from diverse personalities. Then evaluate the user experience of different designs.
- Results published to CHI 2023, CHI 2022, TAICHI 2021, and workshop of WWW 2022 as paper
- Paper wined 2nd place at 2023 ACM CHI Conference Student Research Competition

2021	**Mentee at Accord Project** (an open-source framework of Smart Legal Contracts)
	Google Summer of Code, Remote

- Researched on Conversion of Text Legal Agreements into Smart Legal Contracts using NLP
- Co-work with various open-source contributors from US, UK, and India
- Results present at workshop of POPL 2022 and WWW 2023 as paper

PROGRAMMING SKILLS

- **AI & Data**: PyTorch, TensorFlow, Scikit-Learn, Pandas, Matplotlib, Snorkel, SHAP, GPT-3, SPSS, SmartPLS
- **Blockchain**: Move, Solidity, Vyper, Hardhat, Brownie, Foundry, Slither, IOTA, Bitcoin, TON, IPFS, DIDs, NFT
- **Frontend**: Vue, React, Angular, TypeScript, Tensorflow.js, IndexedDB, Bootstrap, Tailwind, Selenium
- **Backend**: FastAPI, Flask, Django, Expresss.js, Next.js, Nuxt.js, GraphQL
- **Database**: MongoDB, PostgreSQL, Redis, LevelDB, Elasticsearch, Weaviate
- **Cloud & Server**: GCP, AWS, Azure, Docker, CI/CD, Google APIs, Firebase, Ubuntu, Nginx

JOURNAL PUBLICATIONS

- Wu, C.-L., Su, Y.-D., **Chen, E.**, Chen, P.-Z., Chang, Y.-L. & Chen, H.-C. (2022). Development and Validation of Interactive Creativity Task Platform. Frontiers in Psychology, 13, Article 954946. (SSCI, IF = 4.23, Q1)

ACADEMIC CONFERENCES PERSENTATIONS

- **Chen, E.**, Huang, R., Liang, B.S., Shen, Y.K., Huang, P. (2023/10) GPTutor: an open-source AI pair programming tool alternative to Copilot. Paper present at Workshop of Supporting User Engagement in Testing, Auditing, and Contesting AI at Computer-Supported Cooperative Work (CSCW 2023)
- **Chen, E.**, Huang, R., Chen, H. S, Tseng, Y. H., Li, L. Y. (2023/07) GPTutor: a ChatGPT-powered programming tool for code explanation. Paper presented as poster at International Conference on Artificial Intelligence in Education (AIED 2023).
- **Chen, E.**, Roche, N., Tseng, Y. H., Hernandez, W., Shangguan, J, & A, Moore. (2023/05). Conversion of Legal Agreements into Smart Legal Contracts using NLP. Paper presented at Workshop on Natural Language Processing for Knowledge Graph Creation in conjunction with The Web Conference (WWW'23)
- **Chen, E.** (2023/04) Which Factors Predict the Chat Experience of a Natural Language Generation Dialogue Service? Paper received 2nd Place at Student Research Competition in Conference on Human Factors in Computing Systems Extended Abstracts (CHI EA 2023).
- **Chen, E.**, Tseng, Y.-H., You, A., Lo, K.-P., Lin, C. (2022/07) Preliminary Design of an AI Service to Assist Self-regulated Learning by Edge Computing. Paper published at International Conference on Artificial Intelligence in Education (AIED 2022).
- **Chen, E.**, Tseng, Y.-H. (2022/04). A decision model for designing NLP applications. Paper published at the User-Centered NLP workshop in Companion Proceedings of the Web Conference (WWW 2022).

- **Chen, E.** (2022/04). The Effect of Multiple Replies for Natural Language Generation Chatbots. Paper published at Student Research Competition in Conference on Human Factors in Computing Systems Extended Abstracts (CHI EA 2022).
- Roche, N., Hernandez, W., **Chen, E.**, Siméon, J., & Selman, D. (2022/01). Ergo--a programming language for Smart Legal Contracts. Paper presented at the Programming Languages and the Law workshop at Principles of Programming Languages Conference (POPL 2022).
- **Chen, E.**, Tseng, Y.-H., & Lo, K.-P. (2021/11). Focus Plus: Detect Learner's Distraction by Web Camera in Distance Teaching. Paper presented at Taiwan National Chair Professorship Academic Series: Teaching and Learning in Pandemic Era.
- **Chen, E.** & Tseng, Y.-H. (2021/07). A chatbot platform that allow custom avatars and emotions and can provides multiple replies. Demo presented at the Taiwan Computer-Human Interaction Conference (TAICHI 2021)
- **Chen, E.**, Tseng, Y.-H., Chiou, G.-L., & Yuan, C.-W. T. (2021/07). How the numbers of replies and avatars influence the user experience in Natural Language Generation Chatbot. Paper published at the Taiwan Computer-Human Interaction Conference (TAICHI 2021).

COMMUNITY AND PUBLIC SPEAKING EXPERIENCE

NTNU Google Developer Student Club (NTNU GDSC)
- Founder and Leader (2020/08 – 2021/06)
- Hosted workshops for 50+ students to enhance students' developer skills on back-end and chatbot

Mobile Open Platform Conference (MOPCON)
- 2022/10 - Speech: Focus, lets AI record and analyze your computer usage

PyCon APAC 2022
- 2022/09 - Tutorial: Let's Issue NFT by Brownie in 90 mins

Students' Information Technology Conference (SITCON)
- 2022/09 - Speech: As a student researcher, how show what you are made of?
- 2021/09 - Speech: How to raise an NLP AI Chatbot?
- 2020/08 - Speech: Can I use Python to control my computer?

Conference for Open Source Coders, Users and Promoters (COSCUP)
- 2023/07 - Speech: TonSplitter - Group Accounting Tool on Telegram Chatbot with Blockchain Payments
- 2022/07 - Speech: About NFT Marketplace you should know
- 2022/07 - Speech: How is it going at Google Summer of Code?
- 2022/07 - Speech: Using Snorkel to Label and Augment your Data
- 2021/08 - Speech: The user experience design on Natural Language Generation Chatbot
- 2021/08 - Speech: The changes, advantages and challenges of IOTA Chrysalis Update
- 2021/08 - Forum: Current status and potential future of Information Education at Taiwan

HONORS AND AWARDS

Academic
- 2nd place at 2023 ACM CHI Conference Student Research Competition
- Five Virtue Award at NTNU Graduation Ceremony (2022)

- Dean's List at NTNU (2021)
- Excellent Student Award and Scholarship at NTNU (2021)

Ccommunities
- Young Inspirers at PyCon APAC (2022)
- 2nd Place at Hacks In Taiwan Conference (HITCON) 2021 Malware Playground Competition
- 1st Place in the NTNU Freshman Oral Expression Competition (2019)
- Mensa Member (top 1% IQ)

Hackathons
- 2023 Move Hackathon by WebX Tokyo: 2nd place in Circle track with InstaSui
- 2023 Sui Builder House Kyoto: 1st place with Bucket Raffle System
- 2023 TON Hackathon Taipei: 1st place with TonSplitterBot
- 2022 Aptos Hackathon Seoul: 3rd place in tooling track with InBond
- 2019 NASA Space Apps Challenge Taipei: Special Award