

HSIAO-HUA CHENG

☎ (773)766-3978 | ✉ hsiaohuacheng@utexas.edu | in hsiao-hua-cheng | 🐙 chipyaya | 🌐 chipyaya.github.io/tech-portfolio/

EDUCATION

University of Texas at Austin

M.S. in Computer Science, GPA: 3.97/4.0

Aug. 2019 - Dec. 2020

Austin, TX, U.S.

- Selected Courses: Database Systems, Deep Learning Seminar, Natural Language Processing, Algorithms: Techniques & Theory

National Taiwan University

B.S. in Computer Science and Information Engineering, GPA: 4.14/4.3

Sep. 2014 - Jun. 2019

Taipei, Taiwan

- Selected Courses: Deep Learning, Natural Language Processing, Web Retrieval and Mining, Digital Speech Processing
- Presidential Award in Spring 2015 (Top 5% among 150 students in the department)

EXPERIENCE

Amazon.com, Inc.

Software Development Engineer Intern

May. 2020 - Aug. 2020

Santa Clara, CA, U.S. (Remote in TX, U.S.)

- Built a diff analysis tool with **Java** and **JavaScript** that helps engineers point out search relevance gaps. Realized by hitting two versions of search service, comparing search responses and displaying the difference by interactive tables.
- Developed a search comparison recall tool in **Java** and **JavaScript** that explores the effectiveness of an **Elasticsearch** query change. Displayed the changes via self-designed recall metrics and visualization of ES top matching hits.

KKBOX Inc.

Machine Learning Intern

Apr. 2019 - Jul. 2019

Taipei, Taiwan

- Enhanced **5%** on F1 score of intention classification model in the smart speaker by applying attention mechanism.
- Implemented a new architecture of the smart speaker to provide transparent responses to users in **Python**.

Machine Intelligence and Understanding Lab

Undergraduate Research Student, Advisor: Prof. Yun-Nung Chen

Jul. 2018 - Jun. 2019

National Taiwan University

- Constructed a multi-stage fusion model to integrate features from different modalities effectively with **Pytorch**.
- Outperformed the released baseline by **12%** in CIDEr, **7%** in Bleu score, and **12%** in human evaluation.

Machine Discovery and Social Network Mining Lab

Undergraduate Research Student, Advisor: Prof. Shou-De Lin

Jul. 2016 - Jun. 2019

National Taiwan University

- Developed a training method for Entity Network to deal with unseen entities in deep reasoning tasks.
- Improved accuracy by **12%** over 7/13 of tasks in bAbI dataset when dataset contains unseen tokens.

Network System and Service Laboratory, Academia Sinica

Software Engineer Intern, Advisor: Prof. Jane W. S. Liu

Jul. 2016 - Aug. 2016

Taipei, Taiwan

- Designed the interface and functionality of a Beacon manager for architects to easily add, remove and check the coverage of signals of all implemented beacons in a building.
- Built a Beacon Manager as a plugin in Revit, which is a software for architectural design.

PUBLICATION

Y.-T. Yeh, T.-C. Lin, **H.-H. Cheng**, Y.-H. Deng, S.-Y. Su, Y.-N. Chen (2019) "Reactive Multi-Stage Feature Fusion for Multimodal Dialogue Modeling" **AAAI 2019**, DSTC 7 Workshop

AWARDS

KDD Cup 2018: 7th place over 662 teams

May. 2018

- Collected historical and forecasting weather information from World Weather and performed feature engineering.
- Designed tree-based models to predict air quality of next 48 hours for monitoring stations in Beijing and London.

SKILLS

Programming languages
Tools

Python, C/C++, Java, JavaScript, SQL, HTML, CSS
Linux, Git, PyTorch, JQuery