

Huan-Cheng Chang

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RESEARCH INTEREST

The interactions and intersections between HCI and AI, especially dialogue systems.

EDUCATION

National Taiwan University (NTU), Taipei, Taiwan

09/2013 – 01/2018

Bachelor of Science, Electrical Engineering

- Junior/Senior GPA: 4.04/4.30; Cumulative GPA: 3.95/4.30
- Selected coursework:
Machine Learning, Data Structure and Programming, Operating Systems, Computer Architecture, Web Programming*, Psychoinformatics and Neuroinformatics, Intro. to Digital Speech Processing

WORK EXPERIENCE

R&D - Windows and Devices Group, Microsoft Corp.

07/2016 – 06/2017

Software Engineer Intern

Taipei, Taiwan

- Worked on a factory-monitoring IoT solution in cooperation with Nexcom. Built the backend of the system, a Windows App for devices, and a chatbot
- Engaged in development and integration of Premium Surface Pen and related services

RESEARCH EXPERIENCE

Chinese Knowledge and Information Processing Group, Academia Sinica

07/2017 – Present

Advisor: Dr. Wei-Yun Ma

Taipei, Taiwan

Topic: Task-Oriented Dialogue System for Tour Recommendation

- Designed and built all components including language understanding, dialogue management, and language generation
- Generated new tour packages according to users' preferences using our graph-traversal algorithm
- Created diversified responses using RNN combined with eHowNet, a lexical knowledge base
- Implemented our work on Facebook Messenger Platform
- Improving the recommendation strategy of our system using reinforcement learning

Machine Intelligence and Understanding Lab, National Taiwan University

04/2017 – 08/2017

Advisor: Dr. Yun-Nung Chen

Taipei, Taiwan

Topic: Natural Language Generation with Generative Adversarial Network

- Generated natural language output with given meaning representations using SeqGAN

Wireless and Mobile Networking Lab, National Taiwan University

09/2015 – 06/2016

Advisor: Dr. Hung-Yu Wei

Taipei, Taiwan

Topic: LTE-A Group Handover on Small Cells

- Conducted all experiments on small cells provided by Industrial Technology Research Institute
- Reduced the amount of required messages for handover functions using our algorithm

Institute of Mathematics, Academia Sinica

07/2015 – 08/2015

Summer Research Program

Taipei, Taiwan

Topic: Mathematical Signal Processing and Data Analysis

- Gained knowledge in theories in signal processing and data analytics
- Implemented face recognition using Principle Component Analysis

* EE4049, 2017 Spring

SELECTED PROJECTS

Hyper Cook

- Prototyped a web-based smart fridge management system combined with a chatbot which can recommend recipes and keep track of ingredients in the fridge

Taipei City Government FAQ Chatbot

- Built a retrieval-based chatbot (available to the public now) using the TextRank algorithm and FAQ datasets from Taipei City Government

More on my website: <https://changhc.me/>

HONOR

Formosa AI Grand Challenge, Most Promising Student Award

10/2017

- Held by Ministry of Science and Technology, Taiwan

Student Research Fellowship

07/2017 – 01/2018

- Offered by Institute of Information Science, Academia Sinica

Undergraduate Research Fellowship

09/2015 – 06/2016

- Offered by Department of Electrical Engineering, NTU

SKILLS

Programming/Scripting Languages: JavaScript, Python, SQL, C#, C++, Java, \LaTeX

Software Frameworks/Libraries: Tensorflow, Express.js, React.js, Scikit-learn

Languages: Chinese (native), English (fluent), Taiwanese (elementary)

Miscellaneous: 3D Printing, Raspberry Pi, Git (github: changhc), Visual Studio, IntelliJ IDEA

ACTIVITIES

Vice President, NTU Baking Club, Taipei, Taiwan

02/2016 – 06/2016

- Invited a professional teacher for a special guest lecture and demonstration

IT Manager, Viking Bar, Taipei, Taiwan

09/2015 – 10/2016

- Managed our web server on a Linode server and maintained our WordPress blog

Public Relations Team, NTU Electrical Engineering Student Association

09/2014 – 06/2015

- Earned sponsorship for student events and established sustainable relationship with high-tech companies in Taiwan for future collaboration

Guide, Gallery of NTU History, Taipei, Taiwan

09/2014 – 01/2015

- Guided 12 groups of 15+ visitors per group and shared the history of NTU with the audience

INTERESTS

Photography, Cooking, Swing Dance, Traveling