

Yi-Chun Chen (Rimi)

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Education

Doctor of Philosophy in Computer Science

North Carolina State University (NCSSU), Raleigh, NC

August 2015 – Expected graduation date: September 2022

GPA: 3.56/4.0

Master of Science in Computer Science

National Tsing Hua University (NTHU), Hsinchu, Taiwan

September 2011 – July 2013

GPA: 4.17/4.3

Bachelor of Science in Computer Science

National Tsing Hua University (NTHU), Hsinchu, Taiwan

September 2007 – June 2011

GPA: 80.9/100

Research Projects & Work Experiences

Ph.D. Student & Research Assistant

September 2015 – Present

ARNAV Lab—North Carolina State University, US; Advisor: Dr. Arnav Jhala

Comic knowledge management: “A knowledge management framework for accessing comic data.”

- ♦ Provided program interfaces for accessing comic data and the implementations of knowledge graphs and pre-processing scripts.

Comic Comprehension Model: “A comic comprehension model that understands and encodes comic sequences.”

- ♦ Simulated the cognitive process of visual narrative comprehension with the combination of Hierarchical LSTM and features filters to achieve comic sequence embedding.

Comic Narrative Analysis: “An automatically comic panel transition labeling model with narrative sequence and genre analysis.”

- ♦ Proposed a two-layer CNN for comic panel transition labeling with analysis on transition distribution for classifying genres.

Comic Neural Style Transfer: “A neural style transfer framework for comics.”

- ♦ Built a neural style transfer model with pipelines to consider various features for transforming Japanese manga style.

Comic Generator: “A comic creating model that generates comic sequences through iterative editing processes.”

- ♦ Developed a model to create comic sequences through editing iteratively with multiple refinement layers with program interfaces for customizing and adapting the refinement layers.

Reading comprehension task: “A planning-based pipeline to infer the missing part in story text.”

- ♦ Combined the verb predicates in Verbnet with planning concept and framework to make system figure out the missing content through preconditions and postconditions.

Large Scale Novel Visualization: “A web tool to display the large scale text on walls or large screen”

- ♦ Designed a web tool to visualize story text where the jumping between content interactions, switching focus functions, and the sentiment of text were provided.

Interactive Fiction Authoring Tool – V-SET: “An authoring tool for generating Narrative Adventure Game.”

- ♦ Provided a graphic interface that allows authors to modify characters, scenes, event choices, and story contents in narrative adventure games and the functions to render from scripts to visual results.

Research Assistant

May 2014 – June 2015

Institute of Information Science—Academia Sinica, Taiwan; Advisor: Dr. Jane Win-Shih Liu

OpenISDM Project: “An open framework for disaster management information systems.”

- ♦ Developed a distributed, event-triggered, active notification service IASS (Intelligent Active Storage Service) and the program interfaces for disaster scenarios data and capture device records.

Research Assistant

September 2011 – July 2013

Researches in Artificial Intelligence Lab—NTHU, Taiwan; Advisor: Dr. Von-Wun Soo

- ♦ Integrated reinforcement learning with task allocation to distribute complex tasks in large-scale networks and conducted experiments.

Thesis: “Oracle Learning for Agent Negotiation Based on Rationality in Task Allocation Problem.”

National Energy Project: “Studies of automated coordination and self-healing based on multi-intelligent agent systems in smart-grids.”

- ♦ Designed a task allocation protocol for power restoration problems in multi-agents system through intelligent agents’ self-adaptability.

Undergraduate Researcher

January 2010 – November 2010

Student Cluster Competition (SCC), New Orleans, LA; Advisor: Dr. Yeh-Ching Chung

- ♦ Analyzed bottlenecks and predicted execution time of Weather Research & Forecasting Model (WRF).

Publications

- ♦ **Chen YC**, Jhala A. “A Computational Model of Comprehension in Manga Style Visual Narratives.” In Proceedings of the Annual Meeting of the Cognitive Science Society 2021 (Vol. 43, No. 43).
- ♦ **Chen YC**, Robertson J, Jhala A. “Abstractions for Narrative Comprehension Tasks.” In INT/WICED@ AIIDE 2018.
- ♦ Yi-Wei Huang, **Yi-Chun Chen**, Wan-Yu Yu and Von-Wun Soo, “Stochastic Negotiation with Market Utility for Automated Power Restoration on a Smart Grid,” The third international workshop on Agent Technologies for Energy Systems (ATE2012), in AAMAS 2012.

Other Experiences

Competition, Supercomputing 2010 (SC10) Conference: Student Cluster Competition Overall Winner November 2010
Volunteer, Recording Books Service Center for the Blind, NTHU, Taiwan September 2007 – January 2008
Teaching Assistant, Foundations of Interactive Game Design, NCSU, Raleigh, NC. September 2015 – Present
Selected Course Projects, Game Engine Implementation and Game AI Design and Implementation, NCSU, Raleigh, NC 2016