

# 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.”

- ♦ Applied 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.”

- ♦ Proposed 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

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**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