

Ming-Chang Chiu

3710 McClintock Ave, Los Angeles, CA 90089 • <http://charismaticchiu.github.io/>
mingchac@usc.edu • <https://www.linkedin.com/in/eric-chiu> • <https://github.com/charismaticchiu>

EDUCATION

University of Southern California (USC)

Los Angeles, CA

Ph.D. in Computer Science

Aug 2018 – May 2024 (Expected)

- Advisor: Prof. Xuezhe Ma
- Research domain: Robustness in CV/NLP, Representation Learning, Machine Learning
- GPA: 3.92

University of Southern California (USC)

Los Angeles, CA

Master of Science (M.S.) in Electrical Engineering

Aug 2016 – May 2018

- Advisor: Prof. Stefan Scherer
- GPA: 3.82

National Tsing Hua University (NTHU)

Hsinchu, Taiwan

Bachelor of Science (B.S.) in Computer Science & Electrical Engineering
Jun 2015

Sep 2011 –

- Advisors: Prof. Min Sun and Jerry Chou
- Last 60 GPA: 4.05 / 4.30; Cumulative GPA: 3.82 / 4.30

University of Minnesota

Twin Cities, MN

Exchange Student in Computer Science and Engineering

Fall 2014

- GPA: 4.0

Tsinghua University

Beijing, China

Summer Exchange Student in Computer Science

Summer 2012

PUBLICATIONS

- On Human Visual Contrast Sensitivity and Machine Vision Robustness: A Comparative Study. **M.-C. Chiu**, Y. Wang, D.E. Kim, P.-Y. Chen, X. Ma. *Submitted to CVPR*.
- Better May Not Be Fairer: Can Data Augmentation Mitigate Subgroup Degradation? **M.-C. Chiu**, P.-Y. Chen, X. Ma. *Submitted to CVPR*.
- Robust Representation Learning for Group Shifts and Adversarial Examples. **M.-C. Chiu**, X. Ma. *NeurIPS 2022 ML Safety*.
- Screenplay Quality Assessment: Can We Predict Who Gets Nominated? **M.-C. Chiu**, Tiantian Feng, Xiang Ren, Shrikanth Narayanan. In *Proceedings of the Asso. for Comp. Linguistics NUSE 2020*.
- Automated Empathy Detection for Oncology Encounters. Z. Chen, J. Gibson, **M.-C. Chiu**, Q. Hu, T. K. Knight, D. Meeker, J. A. Tulsy, K. I. Pollak and S. Narayanan. In *IEEE Int'l Conf. on Healthcare Information 2020*.
- A system for the 2019 Sentiment, Emotion and Cognitive State Task of DARPA's LORELEI project. V. Martinez, A. Ramakrishna, **Ming-Chang Chiu**, K. Singla, and S. Narayanan. In *Proceedings of the International Conference on Affective Computing & Intelligent Interaction (ACII 2019)*, September 2019. (Oral Presentation)

WORK

EXPERIENCES

Computer Science Department, USC

Los Angeles, CA

Teaching Assistant

Jan 2020 – Present

- Machine Learning for Data Science, Data Mining & Applied Natural Language Processing

Lilt, Inc.

San Francisco, CA

Data Science Intern

May 2020 – Present

- Working on improving a robust personalized machine translation (MT) system with adversarial learning
- Developed a successful defense mechanism against online noisy inputs; 5 BLEU better than the baseline
- Presented a visualization analysis tool for beam search output distribution

Signal Analysis and Interpretation Lab (SAIL), USC [Link](#) Los Angeles, CA
 Research Assistant Aug 2018 – Present

- Designed domain-specific feature extraction and Neural Network architectures for narrative quality assessment
- Utilized statistical consistency measure for linguistic behavior
- Developed a pipeline for Sentiment, Emotion, Cognitive state task of DARPA LORELEI project

Institute for Creative Technologies Los Angeles, CA
 Researcher [Project: Conversation Quality Assessment] Jan 2017 – Dec 2017

- Trained Long Short Term Memory (LSTM) deep learning model and word embeddings for behavioral modeling based on Fisher and alcoholism treatment data
- Predicted new conversation and treatment session quality reaching 75% accuracy
- Generated conversation snapshots on top of Fisher dataset and created Amazon Mechanical Turk jobs to collect objective assessments from people

Illumina, Inc. San Diego, CA
 DevOps Applications Intern May 2017 – Aug 2017

- Built a machine learning Cron for analyzing jobs in the High Performance Computing cluster to identify “destined to fail” jobs using Sci-kit learn, reaching 95% accuracy
- Developed a deep learning Daemon that constantly loads new samples from database (Hive) to train a classification model using Mini-batch update technique with TensorFlow, achieving 78% accuracy
- Maintained enterprise Atlassian Jira and Confluence; created customer workspaces for internal clients

ACADEMIC EXPERIENCE **Reviewer**, IEEE International Conference on Acoustics, Speech and Signal Processing 2022

RELATED COURSEWORK Online Optimization/Learning, ML Theory, Large Scale Optimization for Machine Learning, Convex Optimization, Advanced Representation Learning for NLP, Advanced Algorithms, Knowledge Extraction and Reasoning, Dialogue Systems, Affective Computing

OTHER ACTIVITIES • President of Taiwanese PhD Student Association
 • California Collegiate Salsa Competition Champion 2018

SKILLS Languages: Python, C/C++, MATLAB, Ocaml, Java, HTML/CSS, PHP, SQL, JavaScript
 Technologies & API: PyTorch, Docker, TensorFlow, OpenMP, Hadoop, Spark

HONORS & AWARDS Kaggle Silver Medal (top 4% out of 5,332 teams), Porto Seguro’s Safe Driver Prediction 2017

Celebrating the Viterbi Algorithm Through Art	2017
Honorary Member of Phi Tau Phi Scholastic Society	2015
Excellent Study Group Award, NTHU	2015
National Tsing Hua University International Exchange Scholarship	2014