

# Ming-Chang Chiu

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## EDUCATION

### University of Southern California (USC)

Los Angeles, CA

Ph.D. in Computer Science

Aug 2018 – May 2022 (Expected)

- Advisor: Prof. Muhammad Naveed, Shrikanth S. Narayanan
- Areas of Specialty: Adversarial ML, NLP, a bit of Computer Vision
- GPA: 3.92

### University of Southern California (USC)

Los Angeles, CA

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

Aug 2016 – May 2018

- Advisor: Professor Stefan Scherer
- Areas of Specialty: Data Science & Digital Signal Processing
- 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: Professor 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

- **Ming-Chang Chiu**, Tiantian Feng, Xiang Ren, Shrikanth Narayanan. Screenplay Quality Assessment: Can We Predict Who Gets Nominated? In *Proceedings of the ACL Workshop on Narrative Understanding, Storylines, and Events (NUSE 2020)*, July 2020
- Z. Chen, J. Gibson, **Ming-Chang Chiu**, Q. Hu, T. K. Knight, D. Meeker, J. A. Tulsy, K. I. Pollak and S. Narayanan. Automated Empathy Detection for Oncology Encounters. In *Proceedings of the IEEE International Conference on Healthcare Informatics (ICHI2020)*, December 2020.
- V. Martinez, A. Ramakrishna, **Ming-Chang Chiu**, K. Singla, and S. Narayanan. A system for the 2019 Sentiment, Emotion and Cognitive State Task of DARPA's LORELEI project. In *Proceedings of the International Conference on Affective Computing & Intelligent Interaction (ACII 2019)*, September 2019. (Oral Presentation)

## WORK

### Lilt, Inc.

San Francisco, CA

## EXPERIENCES

Data Science Intern

May 2020 – Present

- Working on improving the adaptation of our machine translation system using adversarial learning

### Computer Science Department, USC

Los Angeles, CA

Teaching Assistant

Jan 2020 – May 2020

- Main Teaching Assistant for CSCI 544 Applied Natural Language Processing

### 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****Grader**, University of Southern California

Spring 2018

CS599 Special Topics: Content Detection and Analysis for Big Data

**SKILLS**

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

**RELATED  
COURSEWORK**

Advanced Topics in Representation Learning for NLP, Advanced Algorithms, Machine Learning for Knowledge Extraction and Reasoning, Dialogue Systems, Affective Computing

**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