Jeng-Yu Chou

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Education

University of Massachusetts Amherst Expected Graduation:
MS/PhD Program in Computer Science May 2027

- GPA: 3.896/4.0
- **Coursework:** Secure Distributed Systems, Adv. Algorithms, Natural Language Processing, Neural Networks

University of Massachusetts Amherst Sep 2018 – Dec 2021
BS in Computer Science

- GPA: 3.869/4.0
- **Coursework:** Computer & Network Security, Applied Cryptography, Algorithms for Data Science

Skills

Programming. Python (Pandas, Numpy), JavaScript, TypeScript
Soft Skills. Time Management, Teamwork, Problem-solving, Documentation
Miscellaneous. LaTeX

Research Experience

UMass Rescue Lab, advised by Prof. Brian Levine Amhert, MA

Graduate Research Assistant Sep 2024 - Present

- Investigated risks to youth and dynamics of illicit activities on individual social media platforms
- Collected and analyzed post text of the social media app, Whisper, across personas representing different demographics using Android Studio, Appium, and MITMproxy for automated data scraping and storage
- Trained and evaluated LLMs (Llama2, RoBERTa) to classify content by maturity and app age suitability
- Presented a quantitative analysis of the Whisper app, characterizing content to reveal risks to children's online safety and challenges in addressing illicit activities in digital environments

Undergraduate Research Assistant Jun 2021 – Dec 2021

- Evaluated dangers posed to minors on social applications
- Utilized Python libraries and Twitter and Discord APIs to scrape and analyze toxicity patterns in text data

Publications

A Quantitative Analysis of Inappropriate Content, Age Rating Compliance, and Risks to Youth on the Whisper Platform
Jeng-Yu Chou and Brian Neil Levine
International Workshop on Child Online Safety and Harms (COSH), Jul. 2024. *paper*

Enabling Cross-Platform Comparison of Online Communities Using Content and Opinion Similarity
Prasanna Lakkur Subramanyam, **Jeng-Yu Chou**, Kevin Nam, and Brian Neil Levine
Findings of EMNLP, Nov. 2024.

Work Experience

University of Massachusetts Amherst Amherst, MA

Teaching Assistant - CMPSCI 563 Internet Law and Policy Sep 2024 - Present

- Created answer keys and grading rubrics for exams, case briefs, and other assignments
- Delegated tasks to course staff and assisted faculty in creating and grading homework, exams, and projects

Teaching Assistant - CMPSCI 220 Programming Methodology Jan 2024 - May 2024

- Conducted discussions and laboratory sessions, and prepared homework, lab, and exam problems

- Assisted faculty in grading homework (including computer programs), exams, and term projects

Automated Controversy Detection, Inc. Amherst, MA

Software Developer Sep 2020 - May 2021

- Developed Detoxify, a Chrome extension that filters and overlays posts on user-selected topics
- Constructed data mining web crawlers for text analysis using Elasticsearch and Kibana

Software Development Intern May 2020 - Aug 2020

- Executed product development, testing, bug identification, and fixes

Leadership Experience

CSWomen Social Events Coordinator Amherst, MA

University of Massachusetts Amherst Dec 2023 - Present

- Organized social/networking events including collaborations with Voices of Data Science '24, UMass Amherst CICS Careers CSWomen Resume Workshop
- Building a support system for women in graduate school and the CICS community

Director of Outreach Boston, MA

TechTogether Boston Hackathon May 2020 - Apr 2021

- Oversaw outreach initiatives at the high school, collegiate, and post-grad levels

Co-Founder Amherst, MA

Microbial Identifier: iSPY Startup Feb 2019 - May 2020

- Utilized Google AutoML Vision to identify morphology of bacteria
- UMass Innovation Challenge third place (raised $7,500) and won three categories at HackHer413

Projects

Stochastic Meta-Learning for Augmentation Policy (SMAP): Enhancing Fine-Grained Image Classification Dec 2023

github: SMAP

- Developed a novel optimized augmentation policy, Stochastic Meta-Learning for Augmentation Policy (SMAP), that leverages meta-learning to optimize augmentation strategies for enhanced classifier performance
- Utilized a ResNet-50 model as the backbone classifier and compares the impact of SMAP against traditional usage of augmentation techniques

Examining Medical Narratives of Eating Disorder Recovery on Reddit May 2023

github: narrative-analysis

- Fine-tuned BERT-based models to identify narratives in Reddit data
- Utilized ChatGPT instructin prompting for trigger and factor extraction and experimented with custom and NLTK stop words for topic modeling
- Employed SentProp (Hamilton et al., 2016) algorithm to generate domain-specific sentiment lexicons