

# Chun-Wei Chiang

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## SUMMARY

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- Proactive problem-solver with expertise in Human-AI Interaction, applied machine learning, and computational social science, resulting in 10+ publications, including 1 IUI publication, 1 CSCW publication, and 2 WWW publications.
- Passionate Ph.D. student researcher with hands-on and well-developed skills, having developed several android apps, chrome extensions, and web apps, including a document summarizing and semantical searching tool using natural language processing algorithms.

## EDUCATION

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**Ph.D. in Computer Science, Purdue University**

January 2020 - May 2024

Selected Coursework: Natural Language Processing, Human-AI Interaction, Human-Centered Computing.

**M.S. in Computer Science, West Virginia University**

August 2016 - August 2018

Selected Coursework: Computer Vision, Deep Learning, Pattern Recognition.

## RESEARCH EXPERIENCE

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**Research Assistant, Purdue University**

January 2020 - Present

**Project: Evaluating Human Groups' Interaction With AI Assistant**

- Designed and executed large-scale human subject empirical studies to understand the difference in human interaction and perception of the AI model between groups of users and individual users from the aspects of performance and fairness.
- Developed a synchronized web application using Vue, Django, and Python for the human subject studies.

**Project: Increasing ML Transparency For Laypeople To Use The Model Appropriately**

- Designed machine learning transparency methods and other mechanisms and evaluate their effects on laypeople's understandings of ML and appropriate usage of the machine learning model.

**Project: Machine Learning Based Content Search For Scientific references**

- Designed a machine learning based content searching tool, which allows users to input a sentence to find the most relevant scientific paper, using triplet model and advanced natural language models, such as Sentence-Bert and T5.
- Implement a web crawler to collect the research papers from different publishers using python.

**NLP Research Intern, Brain Technologies**

June 2022 - August 2022

**Project: Dynamic Knowledge Base For Machine Learning Models**

- Solved a typical machine learning issue in that ML models are limited on the training data and could not access the new knowledge by introducing the latest information from the Internet as the dynamic knowledge base, resulting in a pre-trained question-answering model that could answer questions about events that happened after the model got trained.

**Project: Product Recommendations Based On YouTube Watch History**

- Developed and implement a Google Chrome extension to provide personal recommendations about products, flights, and hotels based on users' watch history on YouTube, using rising natural language models, such as GPT-3 and Sentence-BERT, and content-based recommendation algorithms.

**Project: Document Summering And Semantic Based Searching Tool**

- Designed a machine learning based web browsing assistant tool, which allows users to summarize website content regardless of the language and provides a semantic-based searching function, and implemented it using natural language models, JavaScript, and Django.

**Research Assistant, West Virginia University**

January 2017 - August 2019

**Project: Helping Crowd Workers To Increase Their Salary, Skill, and Career**

- Researched on how to better estimate the working time for an online crowdsourcing task.
- Created a Google Chrome extension to collect 9,155 real-world data on crowd-work tasks and the times required for workers to complete them.
- Modeled the required working time based on the task content and metadata by using a gradient boosted decision tree, which can predict the hourly wages with around 70% accuracy.
- Built an online peer supportive tool to assist crowd workers in improving their professional skills, resulting in a 31.6% work efficiency increase.

## PROFESSIONAL EXPERIENCE

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**Co-founder, Covoair**

January 2019 - August 2019

- Led team to develop decentralized oracle service providing reliable off-chain data to the smart contracts on Ethereum and raised \$50,000 from incubators.
- Designed marketing strategies and develop potential customers.

**Software Engineer Intern, Cateno**

February 2018 - December 2018

- Developed an Initial Coin Offer (ICO) Governance application on Ethereum using web3.py to connect the blockchain network to the local server and allow users to monitor the ICO on the blockchain network through the server.

**Software Engineer, Mitake Information**

November 2014 - June 2015

- Developed and maintained 8 stock exchange Android applications for stockbrokers by using Android SDK (with 300,000 times+ of downloads).
- Collaborated with project management team and sales team to construct new features.

## TEACHING ASSISTANT EXPERIENCE

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**CS 251 - Data Structures And Algorithms**

Spring 2020, Spring 2022

**CS 242 - Introduction to Data Science**

Fall 2021

**CS 180 - Problem Solving and Object-Oriented Programming**

Fall 2020, Spring 2021

## HONOR AND CERTIFICATION

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Google Certificate: Foundations of Project Management

2022

Best Poster Honorable Mention, The World Wide Web Conference (WWW'19)

2019

Travel Grant ( \$1,700 USD), HCOMP

2018

## SKILLS

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Programming      Python, Java, R, JavaScript, HTML, Vue.js, Django

Machine Learning    Pytorch, TensorFlow, Sklearn

## PUBLICATIONS

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Co-authored 10+ peer-reviewed publications, including CSCW, IUI, and WWW.

Chiang, Chun-Wei and Yin, Ming (2021). "You'd better stop! Understanding human reliance on machine learning models under covariate shift". In: *13th ACM Web Science Conference 2021*, pp. 120–129.

Chiang, Chun-Wei and Ming Yin (2022). "Exploring the Effects of Machine Learning Literacy Interventions on Laypeople's Reliance on Machine Learning Models". In: *27th International Conference on Intelligent User Interfaces*, pp. 148–161.