**Jerry (Jui-Chieh) Wu**

Cell Phone: +4915258445694

Email: [jerryjcw@gmail.com](mailto:jerryjcw@gmail.com)  
LinkedIn: [Jerry Wu](https://tw.linkedin.com/in/jerry-wu-02143a22)

**Target Position:**

Machine Learning Engineer / Applied Scientist / Research Engineer

**Areas of Expertise:**

Generative models, Recommendation Algorithms, Natural Language Processing, Representation Learning.

**Experience:**

**Senior Machine Learning Engineer at Meta/Facebook** *September 2021 –*

* Controllable Content Generation (2023-Present):
  + Lead a team of 8 to assure quality and relevant image / video generations, collaborated with cross-functional teams.
  + Architected and rolled out image and video foundation model-based guardrails, creating paradigms that can improve acceptance rates by 20% and increase eligible traffic by 400%.
  + GenAI model development, including text-to-image, virtual try-on, and image-to-video generations.
  + Strategic planning, fine-tune LLaMA (vision instructed LLM) models with RL for image and video enhancement.
  + Refined RL approaches to enhance GenAI model quality, leading to superior A/B test results in user engagements.
* Instagram Ad Layout Optimization (2022-2023):
  + Collaborated with the ads ranking team, deviced a contextual bandit model that dynamically optimized IG ad layouts.
  + Conducted A/B and reverse B/A testing, achieving a 2.5% boost in metrics, a multi-ten-million-dollar revenue growth.
* Vibe-Signature Features (2021-2022):
  + Led the project, collaborated with cross functional teams, developed a self-supervised learning model to encode IG image collections into a "vibe" representation for brand, celebrity, and user matching.
  + Integrated into Meta’s feature generation pipeline, demonstrating statistically significant uplift in relevance and user engagement metrics in downstream tasks.
* Research Projects (2023-Present)
  + Guided 4 research interns through their projects with collaborations, of which they got [1] in submission and [2] accepted at CVPR 2024.
* Conducted 150+ ML and coding interviews for Meta recruiting, contributed to the company's talent acquisition.

**Senior AI Engineer at Linkedin** *May 2020 – June 2021*

* Fine-tuned pre-trained NLP models for web page category classification and named entity recognition.
* Built and validated enterprise product and service datasets using graph-based techniques.

**Senior Research Engineer at Zalando** *October 2016 – April 2020*

* Led the technical direction of the recommendation team, pioneered the E2E DL-based recommenders to production systems.
* Developed personalized product re-ranking models for search and browsing to boost user engagement and revenue.
* Developed personalized relevant [4] and complementary [3] recommenders for fashion items with +3% CTR and CVR.
* Built an end-to-end model training and evaluation pipeline using TensorFlow and Airflow on AWS, enabling automated hyperparameter tuning.

**Staff Software Engineer at HTC** *November 2011 – August 2016*

* Developed a deep learning-based sentiment and topic monitoring system for company forums.
* Designed and implemented an app recommendation system using Spark MLlib and Hadoop.
* Built the backend for HTC BlinkFeed, handling content fetching, indexing, and web frontend integration.

**Senior Software Engineer at TrendMicro** *January 2009 – October 2011*

* Developed an automated analysis module for tracking malicious websites, increasing threat detection by 20%.
* Built a distributed domain reputation system for security threat analysis.
* Designed a web user browsing history graph system for detecting web-based threats using graph algorithms.

**Research Assistant in Network and Systems Lab** *February 2007 – June 2008*

* Designed and evaluated a distributed algorithm for real-time video codec adaptation [5][6].

**Selected Publications:**

**[1]** H. Liu, Multiple authors, **J. C. Wu**, S. He, T. Xiang, J. Schmidhuber, J. Pérez-Rúa, **MarDini: Masked Autoregressive Diffusion for Video Generation at Scale**, ArXiv 2410.20280

**[2]** J. Ren, M. Xu**, J. C. Wu**,Z. Liu, T. Xiang, A. Toisoul, **Move Anything with Layered Theme Diffusion**, in CVPR 2024.

**[3] J. C. Wu**, J. Sanchez and H. Corona, **Session-based Complementary Fashion Recommendations**,In*FashionXRecsys, Collocated with ACM Conference on Recommender Systems*, Copenhagen, 2019.

**[4]**  J. Sanchez, **J. C. Wu**, and M. Khandwawala, **Two-Stage Session-based Recommendations with Candidate Rank Embeddings**,In*FashionXRecsys, Collocated with ACM Conference on Recommender Systems*, Copenhagen, 2019.

**[5]** **J. C. Wu**, P. Huang, J. J. Yao, Homer H. Chen, **A Collaborative Transcoding Strategy for Live Broadcasting over Peer-to-Peer Networks**, In *IEEE Transactions on Circuits and Systems for Video Technology*, Feb, 2011

**[6]** M. T. Lu, **J. C. Wu**, K. J. Peng, P. Huang, Jason J. Yao, Homer H. Chen, **Design and Evaluation of a P2P IPTV System for Heterogeneous Networks**, In *IEEE Transactions on Multimedia, special issue on content storage and delivery*, Dec, 2007

**Education**:

National Taiwan University, Taipei, Taiwan.

Graduate Inst. Of Computer Science and Information Engineering

M.S. from Graduate Institute of CSIE, *September 2004* – *June 2006* (GPA:4.0/4.0)

B.S. from Dept. of CSIE, college of EECS, *September 2000* – *June 2004* (Junior & Senior GPA:3.75/4.00)

**Technologies:**

*Machine Learning:* Pytorch, Num/Scipy, Tensorflow

*Programming Languages*: Python, Scala, Java, SQL

*Dev Tools*: Jenkins, JIRA, Airflow, Presto, AWS, Git, Kupernetes.