Chung-Yi Weng

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Education

- **Ph.D. in Computer Science & Engineering**, University of Washington — **2018 ~ 2023**
  - o Topic: Reconstructing and Rendering People from Photos and Videos in the Wild
  - o Committee: Brian Curless, Ira Kemelmacher-Shlizerman, Pratul Srinivasan, and Richard Szeliski
- **M.S. in Computer Science & Engineering**, University of Washington — **2015 ~ 2018**
  - o Thesis: Photo Wake-Up: 3D Character Animation from a Single Photo
  - o Advisor: Brian Curless and Ira Kemelmacher-Shlizerman
- **M.S. in Computer Science & Information Engineering**, National Taiwan University — **2005 ~ 2007**
  - o Thesis: RoleNet: Movie Analysis from the Perspective of Social Networks
  - o Advisor: Ja-Ling Wu
- **B.S. in Computer Science & Information Engineering**, National Taiwan University — **2001 ~ 2005**

Employment

- **Software Engineering Intern,** Google LLC — **2019**
  - o Augmented Perception group led by Shahram Izadi
  - o Explored 3D neural rendering, co-working with Rohit Pandey, Christian Hane, Sofien Bouaziz, and Sean Fanello.
- **Research Intern,** Facebook, Inc. — **2018**
  - o Computational Photography group led by Michael Cohen
  - o Looking into human modeling from the lens of modern deep neural networks.
- **Tech Lead, Principal Engineer**, CyberLink Corp. — **2008 ~ 2014**
  - o With expertise in core video/image solutions for consumer multimedia software.
  - o Developed *13 projects* related to computational photography and computer vision, including panorama, photo compositing, image segmentation and matting, hand tracking, video object tracking and segmentation, face detection and recognition, and facial landmark detection.
  - o 9 granted patents (8 US patents and 1 JP patent)

Selected Publications

[C1] **Chung-Yi Weng**, Pratul P. Srinivasan, Brian Curless and Ira Kemelmacher-Shlizerman, "PersonNeRF: Personalized Reconstruction from Photo Collections," CVPR 2023 — **2023**

[C2] **Chung-Yi Weng**, Brian Curless, Pratul P. Srinivasan, Jonathan T. Barron and Ira Kemelmacher-Shlizerman, "HumanNeRF: Free-Viewpoint Rendering of Moving People from Monocular Video," CVPR 2022 Oral Presentation — **2022**

[C3] **Chung-Yi Weng**, Brian Curless, and Ira Kemelmacher-Shlizerman, "Photo Wake-Up: 3D Character Animation from a Single Photo," CVPR 2019. People's Choice Award, UW CSE Industry Day, (> 400K YouTube views) — **2019**

[J1] **Chung-Yi Weng**, Wei-Ta Chu, and Ja-Ling Wu, "RoleNet: Movie Analysis from the Perspective of Social Networks," IEEE Transactions on Multimedia, 2009. — **2009**

[C4] Jun-Cheng Chen, Wei-Ta Chu, Jin-Hau Kuo, **Chung-Yi Weng**, and Ja-Ling Wu, "Tiling Slideshow," ACM Multimedia, 2006. Best Paper Award — **2006**

Patents

- **8 US granted patents, 1 JP granted patent**
  [P1] "Method of grouping images by face", US 8,121,358
  [P2] "Method of browsing photos based on people", US 8,531,478
  [P3] "Systems and methods for tagging photos", US 8,649,602
  [P4] "Systems and methods for performing facial detection", US 8,693,739
  [P5] "System and method for selecting an object boundary in an image", US 8,761,519
  [P6] "Systems and methods for improving object detection", US 8,769,409
  [P7] "Systems and methods for tracking an object in a video", US 8,867,789
  [P8] "Systems and methods for image editing", US 9,336,583
  [P9] "How to group images by face", JP 4,925,370

Honors & Fellowships

- UW Reality Lab Google Fellowship	**2022 ~ 2023**
- UW Reality Lab Research Fellow	**2018 ~ 2023**
- Bob Bandes Best Teaching Assistant Award Honorable Mention	**2020**
- UW Reality Lab Huawei Fellowship	**2018 ~ 2019**
- People's Choice Award, Allen School Industry Affiliates Research Day	**2018**
- The David Notkin Endowed Graduate Fellowship in Computer Science & Engineering	**2015 ~ 2016**
- Best Paper Award, ACM Multimedia Conference 2006	**2006**

Teaching & Services

- **TA Lead,** CSE457 Computer Graphics	**University of Washington**	**2020 Spring**

  o Instructor: Adriana Schulz
  o Awarded as Best Teaching Assistant (Bob Bandes Award)

- **TA,** CSEP557 Trends in Computer Graphics	**University of Washington**	**2019 Spring**

  o Instructor: Brian Curless
- **Reviewers**
  o CVPR, ICCV, SIGGRAPH, SIGGRAPH Asia

Press and News

[N1] MIT Technology Review, "Machine vision can create Harry Potter–style photos for muggles"
[N2] NVidia News, "Transforming Paintings and Photos Into Animations With AI"
[N3] UW News, "Behind the magic: Making moving photos a reality"

Open-Source Software

- HumanNeRF: Free-Viewpoint Rendering of Moving People from Monocular Video	**2022**

  o https://github.com/chungyiweng/humannerf (> 600 stars)

Invited Talks

[T1] CSNext, "HumanNeRF: Free-Viewpoint Rendering of Moving People From Monocular Video"	**2022**
[T2] Stanford Graphics Group, "Vid2Actor: Free-viewpoint Animatable Person Synthesis from Video"	**2021**
[T3] UW Allen School Colloquium, "Photo Wake-Up: 3D Character Animation from a Single Photo"	**2019**