

Bindita Chaudhuri

✉ bindita91@gmail.com [bindita.github.io](https://github.com/bindita) [in binditachaudhuri](https://www.linkedin.com/in/binditachaudhuri)

Summary

Professional with 4+ years of Industry Research and 9+ years of Applied Research experience
Interested in Generative AI (computer vision), 3D humans/perception (graphics), Multimodal Models

Work Experience

Flawless AI, Senior Applied Scientist / Manager

Oct 2023 – Present
Los Angeles, CA

- Building cutting-edge Generative AI technology for filmmaking
 - 3D Face Neural Rendering for visual dubbing
 - Multilingual audio-driven photorealistic facial animation
 - Text-controlled 3D human body motion generation & editing

Meta, Research Scientist

2021 – 2023
Redmond, WA

- Explored generative transformers for text-to-video and image-to-video synthesis.
- Designed a NeRF to reconstruct 3D humans for embodied AI, conditioned on 3D body motion driven by text/speech. Work published in ABAW workshop, *ECCV 2024*.
- Designed a novel multimodal coarse-to-fine approach to detailed 4D face geometry reconstruction from in-the-wild videos for AR/VR applications, published in *CVPR 2023*.
- Developed a network to accumulate spatio-temporal information from in-the-wild videos for dynamic face texture completion free from self-occlusions.
- Handled emotions and non-speech vocalizations for speech-driven 3D facial animation.
- Improved texture recovery for synthetic faces using a StyleGAN based architecture.

Facebook Reality Labs Research, Research Intern

Summer 2020
Sausalito, CA

- Designed a novel region-adaptive variational autoencoder to synthesize photorealistic editable texture maps for 3D humans for virtual try-on applications.
- Added independent geometry and texture controllability feature for semi-supervised 3D human data generation. Work published in *CVPR 2021*.

Microsoft Cloud & AI, Student Researcher

2019 - 2020
Redmond, WA

- High-fidelity personalized face avatar generation, published in *ECCV 2020*.
- Stabilized face tracking for in-the-wild videos.

Microsoft Research, Research Intern

Summer 2018
Redmond, WA

- A novel *real-time* multi-task learning framework for joint 2D face detection and 3D facial motion retargeting of multiple faces, published in *CVPR 2019*.
- Developed model was deployed in the **Puppets** feature of **SwiftKey** for Android phone users for immersive virtual communication.

Intel Labs, Research Intern

Summer 2017
Santa Clara, CA

- Proposed a spatial transformer based deep neural network for optical flow prediction and image super-resolution for frame interpolation/view synthesis from HD multi-camera array images. *U.S. patent granted*.

Publications

KinMo: Kinematic-aware Human Motion Understanding and Generation

P. Zhang*, P. Liu*, H. Kim, P. Garrido, **B. Chaudhuri**

ICCV 2025
[Webpage](#)

TalkinNeRF: Animatable Neural Fields for Full-Body Talking Humans

A. Chatziagapi, **B. Chaudhuri**, A. Kumar, R. Ranjan, D. Samaras, N. Sarafianos

ECCVW 2024
[Webpage](#)

<i>Semi-supervised Synthesis of High-Resolution Editable Textures for 3D Humans</i> B. Chaudhuri , N. Sarafianos, L. Shapiro, T. Tung	CVPR 2021 Webpage
<i>Personalized Face Modeling for Improved Face Reconstruction and Motion Retargeting</i> B. Chaudhuri , N. Vedpant, L. Shapiro, B. Wang	ECCV 2020 (Spotlight) Webpage
<i>Joint Face Detection and Facial Motion Retargeting for Multiple Faces</i> B. Chaudhuri , N. Vedpant, B. Wang	CVPR 2019 Webpage
<i>GestureCalc: An Eyes-Free Calculator for Touch Screens</i> B. Chaudhuri* , L. Perlmutter*, J. Petelka, P. Garrison, J. Fogarty, J. O. Wobbrock, R. E. Ladner	ACM ASSETS 2019 PDF , Code
<i>Learning to Generate 3D Stylized Character Expressions from Humans</i> D. Aneja, B. Chaudhuri , A. Colburn, G. Faigin, L. Shapiro, B. Mones	WACV 2018 Webpage
<i>Multi-Label Remote Sensing Image Retrieval using a Semi-Supervised Graph-Theoretic Method</i> B. Chaudhuri , B. Demir, S. Chaudhuri, L. Bruzzone	IEEE TGRS 2018 PDF
<i>Region-Based Retrieval of Remote Sensing Images using an Unsupervised Graph-Theoretic Approach</i> B. Chaudhuri , B. Demir, L. Bruzzone, S. Chaudhuri	IEEE GRSL 2016 PDF
<i>View interpolation of multi-camera array images with flow estimation and image super resolution using deep learning</i> B. Chaudhuri , F. Zhang, O. Nestares	US Patent 10,547,823, 2020 PDF

Education

Ph.D. University of Washington , <i>Computer Science</i> • <i>Thesis</i> : Deep Facial Expression Modeling and 2D-to-3D Motion Retargeting	2016 – 2021
M.E. Indian Institute of Technology Bombay , <i>Electrical Engineering</i> • <i>Thesis</i> : Region-based Remote Sensing Image Retrieval using Graph Theory	2014 – 2016
B.E. Jadavpur University , <i>Electronics and Telecommunication Engineering</i> • <i>Thesis</i> : Low Cost Low Bandwidth Virtual Education Platform Design	2010 – 2014

Technical Skills

- **Proficient**: Python, Pytorch, Keras/Tensorflow
- **Fluent**: C/C++, Swift, CUDA

Academic Projects

Local collision avoidance using laser sensor data for a nano-drone	Demo
Compressed video reconstruction, stabilization and real-time non-rigid object tracking	Demo
Study of electromagnetic radiation effects at various locations in Kolkata	The Times of India Article

Honors and Awards

<i>People's Choice Award</i> , University of Washington Research Day, 2017	link
<i>Department Academic Excellence Award</i> , Indian Institute of Technology Bombay, 2016	link
<i>University Gold Medal, The Supriya Basu Scholarship & others</i> , Jadavpur University, 2014	link

Academic Activities

Reviewer: ACM TOG, TPAMI, SIGGRAPH Asia, CVPR, ECCV, ICLR, ICPR, IEEE VR etc.
Teaching Assistant: UW (CSE) and IIT Bombay (EE)
Area Chair (student), CSE Graduate Admissions Committee, University of Washington, 2020