

## EDUCATION

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<b>Georgia Institute of Technology</b> H. Milton Stewart School of Industrial and Systems Engineering Ph.D. in Machine Learning – Advisor: Dr. Jing Li	Atlanta, GA  2026 (expected)
M.S. in Statistics	2024 (expected)
<b>Carnegie Mellon University</b> B.S. in Chemical Engineering, University and College Honors – Minor: Computer Science	Pittsburgh, PA 2021

## RESEARCH INTERESTS

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- Methodological developments in machine learning and artificial intelligence
  - Knowledge-informed deep learning
  - Domain adaptation and generalization algorithms
  - AI in computer vision
  - Federated learning
- Applications in health and biomedicine
  - Oral lesion detection and classification in CBCT
  - Health monitoring and anomaly detection with contactless sensors
  - Real-time monitoring and control for cell therapy manufacturing

## SELECT PUBLICATIONS

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### Published or accepted

**R. Chen**, Y. Lee, H. Yan, M. Mupparapu, F. Lure, J. Li, and F. C. Setzer, “Leveraging pre-trained transformers for efficient segmentation and lesion detection in cone-beam ct scans”, *Journal of Endodontics*, 2024.

B. Wang, **R. Chen**, J. Li, and K. Roy, “Interfacing data science with cell therapy manufacturing: Where we are and where we need to be”, *Cytotherapy*, 2024, ISSN: 1465-3249.

**R. Chen**, B. Joffe, P. Casteleiro Costa, C. Filan, B. Wang, S. Balakirsky, F. Robles, K. Roy, and J. Li, “Real-time semantic segmentation and anomaly detection of functional images for cell therapy manufacturing”, *Cytotherapy*, vol. 25, no. 12, pp. 1361–1369, 2023, ISSN: 1465-3249.

M. Shuaibi, S. Sivakumar, **R. Chen**, and Z. W. Ulissi, “Enabling robust offline active learning for machine learning potentials using simple physics-based priors”, *Machine Learning: Science and Technology*, vol. 2, no. 2, p. 025 007, 2020.

## CONFERENCE PRESENTATIONS

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Deep learning for three-dimensional semantic segmentation for periapical lesion detection on cone-beam computed tomography, *Society for Imaging Informatics in Medicine Annual Meeting*, Jun. 2024, National Harbor, MD.

Accelerating quantum mechanical simulations using physics-based machine learning potentials, *American Institute of Chemical Engineers Annual Meeting*, Nov. 2020, Virtual.

Enhancing the workflow efficiency of high throughput surface calculations, *Pittsburgh-Cleveland Catalysis Society Annual Symposium*, Aug. 2019, Pittsburgh, PA.

## AWARDS

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Chemical Engineering Summer Scholars Carnegie Mellon University	2020
Chemical Engineering Summer Scholars Carnegie Mellon University	2019
Summer Undergraduate Research Fellowship Carnegie Mellon University	2019