

ARJUN CHANDRA

INTRO Hello! I am a Research Fellow in Electrical & Computer Engineering at Boston University, passionate about bridging human learning and AI. My work explores how insights from cognitive development can inspire new data-efficient and human-centric AI systems. I am also interested in designing evaluation methods for high-stakes applications of AI in the physical and life sciences.

EDUCATION **Boston University** Boston, MA
B.A. Physics & Computer Science 2021 – 2025

- GPA: 3.98/4.00
- Advisors: Boqing Gong, Irving Bigio
- Relevant Coursework:
 - Multimodal Machine Learning (Graduate)
Project: Targeted Caption Generation Improves Compositional Reasoning in VLMs
 - Bandit Algorithms (Graduate)
Project: Fair Algorithms for Multi-Agent Multi-Armed Bandits
 - Quantum Computing (Graduate)
Project: Lattice-Based Key Encapsulation Mechanisms in Post-Quantum Cryptography

WORK EXPERIENCE **Adobe** | San Jose, CA May 2024 – Aug 2024
AI/ML Intern - Machine Learning Engineer

- Implemented and deployed a scalable LLM-based recommendation engine on roadmap for future release in Adobe Experience Platform AI Assistant
- Built and managed Intern Connect, a Slack app that pairs hundreds of Adobe interns around the world for weekly virtual coffee chats

RESEARCH EXPERIENCE **Boston University Data Science & Machine Learning** June 2025 – Present
Research Fellow | Advisor: Venkatesh Saligrama

- Curating synthetic data and developing automatic evaluation methods to probe failure modes in speech-to-speech models
- Published in EACL 2026

Boston University Image & Video Computing Jan 2025 – Present
Research Assistant | Advisor: Boqing Gong

- Investigating developmentally plausible learning mechanisms for intelligent and data-efficient pre-training of multimodal foundation models
- Published in ICCV 2025 and CVPR 2026

Adobe Research Aug 2024 – May 2025
Student Researcher | Advisor: Yunyao Li

- Integrated multi-source knowledge retrieval into text-to-video pipelines to achieve improved factual accuracy and interpretability
- Published demonstration in AAI 2025 and CVPR 2025

Boston University Biomedical Optics Lab Sept 2023 – Present
Research Assistant | Advisor: Irving Bigio

- Implemented 3D object detection methods to identify myelin degeneration in microscopic brain imaging of late-stage Alzheimer's and CTE patients
- Published in Alzheimer's & Dementia and Neurophotonics

- PUBLICATIONS
1. Shengao Wang, Wenqi Wang, Zecheng Wang, Max Whitton, Michael Wakeham, Arjun Chandra, (+14 authors), Kate Saenko, Venkatesh Saligrama, Boqing Gong. *BabyVLM-V2: Toward Developmentally Grounded Pretraining and Benchmarking of Vision Foundation Models*. (CVPR) 2026.
 2. Arjun Chandra, Kevin Miller, Venkatesh Ravichandran, Constantinos Papayiannis, Venkatesh Saligrama. *Hearing Between the Lines: Unlocking the Reasoning Power of LLMs for Speech Evaluation*. (EACL) 2026 Findings.
 3. Shengao Wang, Arjun Chandra, Aoming Liu, Venkatesh Saligrama, Boqing Gong. *BabyVLM: Data-Efficient Pretraining of VLMs Inspired by Infant Learning*. (ICCV) 2025.
 4. Daniel Lee*, Arjun Chandra*, Yang Zhou, Yunyao Li, Simone Conia. *Grounding Pixels in Facts: Distilled Knowledge Retrieval for Factual Text-to-Video Generation*. (CVPR) 2025 Demonstration Program.
 5. Daniel Lee*, Arjun Chandra*, Yang Zhou, Yunyao Li, Simone Conia. *Rewind and Render: Towards Factually Accurate Text-to-Video Generation with Distilled Knowledge Retrieval*. (AAAI) 2025 Demonstration Program.
 6. Anna Novoseltseva, Arjun Chandra, Alexander Gray, Shuying Li, Mikayla Bradsby, Irving Bigio. *Accelerating Myelin Defect Detection in Neurodegenerative Disorders: A Human-in-the-Loop Deep Learning Approach with Birefringence Microscopy*. (Neurophotonic).
 7. Anna Novoseltseva, Gulce Kureli, Shuaibin Chang, Jiarui Yang, Precious Antinew, Arjun Chandra, (+5 authors), David Boas, Irving Bigio. *Imaging myelin degradation in ex vivo prefrontal cortex tissue blocks in Alzheimer’s disease and chronic traumatic encephalopathy*. (Alzheimer’s & Dementia).

- TEACHING EXPERIENCE
- **Teaching Assistant, CS 460 (Database Systems)** Spring 2025
 - **Course Assistant, CS 460 (Database Systems)** Fall 2024
 - **Learning Assistant, PY212 (General Physics 2)** Fall 2023
 - **Learning Assistant, PY252 (Electricity & Magnetism)** Spring 2023
 - **Peer Tutor, Educational Resource Center** 2022 – 2024

- AWARDS & HONORS
- **Faculty Award for Interdisciplinary Majors**, Boston University May 2025
Awarded to one graduating senior in the interdisciplinary physics major for outstanding academic performance and significant contributions to interdisciplinary research.
 - **UROP Student Research Award**, Boston University Jan 2024 – May 2025
Undergraduate research funding awarded for three consecutive semesters.
 - **SAEF Award**, Boston University Dec 2024
1 of 17 students in the College of Arts & Sciences awarded funding for conference travel and research expenses.
 - **Third Place**, MIT iQuHack Feb 2024
Earned third place in MIT’s annual international quantum computing hackathon.

- LEADERSHIP & OUTREACH
- **Boston University PRISM** Aug 2024 – May 2025
Peer Mentor
 - Mentored incoming class of physics majors in course planning and research
 - **Boston University Children’s Center** Jan 2024 – Aug 2024
Classroom Assistant
 - Assisted with daily routines and educational activities for preschool children