

ERIC FITHIAN

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EDUCATION

University of Colorado Boulder

B.S. in Computer Science, *summa cum laude*, GPA: 4.0/4.0
Dean's List all 3 years; graduated one year early

Boulder, CO

Aug. 2022 – May 2025

RESEARCH EXPERIENCE

University of Chicago, Center for Applied AI

Research Professional

Chicago, IL

July 2025 – Present

- (ongoing) RA to **Prof. Suproteem Sarkar**: Using embedding models to investigate how stereotypes affect investment.
- (ongoing) RA to **Prof. Rad Niazadeh**: Using LLMs to solve open problems in mathematics of operations research.
- (ongoing) RA to **Prof. X.Y. Han**: Exploring the application of vision-language models to annotate video recordings of neurosurgical procedures.
- RA to **Prof. Jacob Conway**: Built end-to-end NLP pipelines covering 11 million news documents to study journalist ideology.
- RA to **Prof. Giovanni Compiani**: Used pretrained embedding models for consumer choice models of Amazon products.
- With Kirill Skobelev. Co-developed an open-source Python toolkit addressing reproducibility and scalability challenges in LLM-based structured data extraction. [\[paper\]](#) [\[code\]](#)

University of Colorado Boulder, Human Biobehavior Signals Lab

Research Assistant to Prof. Theodora Chaspari

Boulder, CO

June 2024 – Oct. 2025

- First-authored a paper on multimodal hirability prediction using transformer-based NLP and computer vision (OpenFace, FaceNet) combined with multimodal fusion.
- Presented as a poster at ICMI 2025, Canberra, Australia.

PUBLICATIONS

Fithian, Eric and Theodora Chaspari. Leveraging Pre-Trained Transformers and Facial Embeddings for Multimodal Hirability Prediction in Job Interviews. *Proceedings of the 27th ACM International Conference on Multimodal Interaction*, 2025. [\[paper\]](#)

WORKING PAPERS

Fithian, Eric and Kirill Skobelev. DELM: a Python toolkit for Data Extraction with Language Models. 2026. *arXiv preprint*. [\[paper\]](#) [\[code\]](#)

Fithian, Eric. Investigating Neuron-Level Signals for Predicting Beneficial Splitting in Neural Networks. 2026. *Preprint forthcoming*.

INDUSTRY EXPERIENCE

Spectrum / Charter Communications

Software Engineering Intern

Denver, CO

June 2024 – Aug. 2024

- Developed a mobile data usage simulation service.
- Reverse-engineered legacy Perl and Shell scripts to fix critical production bugs.

PROJECTS & SOFTWARE

DELM (Data Extraction with Language Models): Python toolkit for reproducible LLM-based structured data extraction. [GitHub] [PyPI] [Docs]

VizWiz VQA Challenge: Designed a custom ViT+BERT backbone with bidirectional cross-attention transformer architecture for visual question answering; 1st place among ~150 graduate students as an undergraduate. [GitHub]

Java CNN Library: Built a Convolutional Neural Network framework from scratch in Java, including convolutions, pooling, backpropagation, SGD with momentum, and activations. Validated on MNIST.

Truth or Drink AI: AI-powered party game using a Bayesian framework and dynamic LLM agent orchestration. Live at airtruthordrink.com.

HONORS AND AWARDS

- 1st Place, VizWiz VQA Challenge (among ~150 graduate students, as an undergraduate) 2025
- Computer Science departmental nominee for CU Boulder College of Engineering Silver Medal (one senior nominated per department annually) 2025
- *summa cum laude* 2025
- Dean's List all 3 years 2022–2025

VOLUNTEERING AND OTHER

Volunteer Software Engineer, Blueprint Boulder	2023 – 2024
Private Tutor, Computer Science and Calculus	2022 – 2024

SKILLS

Coding: Python (PyTorch, transformers, pandas, numpy), Java, C++, SQL, Git, LaTeX.

Machine Learning & AI: LLMs, NLP, Multimodal ML, Computer Vision, RL.