

Bill Ray

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Seeking employment June 2026. Passionate about investments and data centers. Connect with me on LinkedIn.

EDUCATION

University of Denver

MS Real Estate and the Built Environment **GPA: 4.0**

Sep 2024 - Jun 2026 (expected)

University of Massachusetts Amherst

MS Computer Science **GPA: 3.97**

Jan 2022 - May 2023

BS Computer Science **GPA: 3.71**

Sep 2018 - May 2021

Relevant Coursework: NAHB Student Competition, Income Property Finance, Financial Analysis, Algorithms for Data Science, Advanced Natural Language Processing

Skills: Financial Modeling, Data Manipulation, Web-Scraping, Data Visualization, Excel, Python, JavaScript, Natural Language Processing, Machine Learning

PROJECTS

NAHB Student Competition

Sep 2024 - Feb 2025

Skills: Data Analysis, Market Analysis, Collaboration, Homebuilding

- Contributed to DU's graduate NAHB Student Competition Production Homebuilding Team, placing 3rd nationally
- Analyzed market data to inform the design and pricing of a residential development
- Applied data-mining techniques to collect competing home builder pricing data
- Trained machine learning models to predict competitor base prices on home
- Built web-based analytical tools to help teammates interpret data and make informed decisions

WORK EXPERIENCE

University of Denver - Research Assistant

Oct 2024 - Present

Skills: Data Analysis, Python, Data Pipelines, Sentiment Analysis, REIT Pricing

- Analyzed 30 interview transcripts with home building leaders to produce a report on the industry's labor shortage, which was referenced by NAHB Chief Economist Robert Dietz in a technical supplement
- Combined building code dataset and Census Place data to create a by-municipality IRC and IECC code map of Colorado then presented to decision-makers at McKinsey Consulting's "Public-Private Housing Consortium" event
- Applying large language models to quantify investor sentiment from commercial real estate news and forecasting price-to-NAV ratios of REITs

Kitware - R&D Engineer

Jun 2023 - Mar 2024

Skills: Language Models, Experiment Design, Technical Presentation

- Spearheaded experimentation strategies for Large Language Models (LLMs) in a DARPA research program, enhancing AI decision-making with a focus on alignment and explainability
- Led development of decision-making algorithms, achieving an increase in alignment accuracy from 48.45% to 84.7%
- Presented key findings to DARPA, influencing project direction and showcasing milestones
- Contributed to industry-track research paper exploring LLM alignment in medical triage domains, published in the NAACL 2024 journal, demonstrating thought leadership in ethical AI

ACADEMIC

UMass Machine Learning Club President

Sep 2022 - Feb 2023

Skills: Public Speaking, Educating, Communication, Team Building

- Held weekly meetings and spoke in front of approximately 60 members
- Educated members on machine learning fundamentals: linear algebra, gradient descent, neural networks, PyTorch
- Organized club officers to plan and execute events
- Created tools to visualize concepts such as this gradient descent demo: [GitHub](#)

Published Paper: Language Models are Alignable Decision-Makers

[ACL Anthology](#)

- Full Title: Language Models are Alignable Decision-Makers: Dataset and Application to the Medical Triage Domain
- Authors: Brian Hu, Bill Ray, Alice Leung, Amy Summerville, David Joy, Christopher Funk, Arslan Basharat
- Implemented experiment designs and led development of decision-making algorithms for medical applications