nietztein.github.io/

Garland, TX, United States

 $+1\ 469-434-0261$ 

August 2022-Present

Graduation: May 2026

Education

University of Texas at Dallas, Richardson, TX, United States

Bachelor of Science in Computer Science with Honours

Minors: Mathematics and Asian Studies GPA: overall 3.964/4.0; CS-only 3.98/4.0

Presentations

Evaluating Large Language Models in Scientific Research: Practical Applications and Challenges. UT Dallas Summer Platform for Undergraduate Students, 2024.

Coding Semantics: Sentiment Analysis for Movie Reviews. [Co-presented]. Association for Computing Machinery UT Dallas Research Conference, 2023.

Research Experience

### AI Research Fellow with Relativity USA

Fall 2024 - Present

Worked on Evaluating Frontier Models for Bias and Representation project.

- Leading a project to systematically assess and quantify biases in frontier AI models, focusing on the analysis of text, photo, and audio evidence within the U.S. justice system.
- Collaborating with a team of applied scientists to develop evaluation metrics that measure the harmful impact of biases in large language models, particularly within legal contexts.
- Implementing Python-based tools to identify and quantify errors in AI models, resulting in a 30
- Conducting comprehensive testing of AI models to uncover systematic biases, with findings exceeding the accuracy and depth of existing bias detection methodologies by 15
- Presenting actionable insights to stakeholders, aimed at mitigating the impact of biases in AI
  applications within the justice system.

## Undergraduate Researcher with Dr. Ovidiu Daescu

Spring 2024 - Present

Worked on Computer Vision and Feature Selection project.

- Innovating new metrics and methods for feature extraction and selection to enhance model precision in computer vision research under Dr. Daescu.
- Conducting an extensive literature review in sentiment analysis, identifying emerging trends and methodologies to inform ongoing research efforts.

### Research Intern with Hsu Lab

Summer 2024

Worked on Machine Learning Applications in Materials Science project.

- Collaborated with Dr. Hsu to apply Large Language Models (LLMs) and machine learning techniques to complex Materials Science experiments.
- Focused on applications such as image segmentation and Bayesian inference, addressing intricate challenges in materials science research.

#### Student Researcher with Dr. Doug DeGroot

Fall 2023

Worked on Coding Semantics: Sentiment Analysis in Movie Reviews project.

- Collaborated with a team and academic advisor to determine the direction of an open-ended sentiment analysis project, leading to the development of models using BERT and XGBoost.
- Developed sentiment analysis models that accurately classified 90 percent of movie review sentiments, showcasing the effectiveness of the chosen methodologies.
- Presented research findings to a panel of university academics and industry professionals, receiving positive feedback for the project's innovative approach.

Industry Experience

# Data Glacier

July 2024-Present

Natural Language Processing Intern

 Working on multilingual NLP projects, developing models with high accuracy across diverse languages.

Teaching	UTD CS 2336 Computer Science II, Grader	Spring 2024
Experience	UTD CS 1337 Computer Science I, Teaching Assistant	Spring 2024
	UTD CS 1334 Programming Fundamentals for Non-Majors, Teaching Assista	ant Fall 2023
	GARLAND ISD Various Math Courses, Substitute Teacher	Fall 2023-Present
	ICODE SCHOOL Introduction to Web Development, Technical Lead	Fall 2023-Spring 2024

Other	Ai4All, Incoming Machine Learning Fellow	Sept 2024-Present
Experience	Headstarter AI, Software Engineering Fellow	Jul 2024-Present
	UT Dallas Office of Research, Research Information Systems Worker	Jun 2024-Present
	Break Through Tech AI, AI/ML Fellow	May 2024-Present
	ACM UTD, Back-end Developer	Feb 2024-Apr 2024
	UTDesign, Frontend Software Developer	$\mathrm{Jan}\ 2024\mathrm{-May}\ 2024$
	Walters Kluwer Tax and Accounting, Extern	Mar 2023

Awards 2024 Undergraduate Research Apprenticeship Fellowship Award (URAP) - \$4,500 2024 Leland Dillaha MSEE '97 Undergraduate Scholarship – \$1,000

2022 National Merit Scholarship UT Dallas – \$3,000

Community UT Design, Code Review Volunteer Summer 2024
Involvement UTD Society of Asian Scientists and Engineers, Secretary and Chair
UTD Artificial Intelligence Society, Officer October 2022-May 2023

# References Dr. Ovidiu Daescu

Computer Science Department Head at UT Dallas, Email: daescu@utdallas.edu, Tel: (972) 883-4196.

#### Dr. Julia Hsu

Professor of Materials Science at UT Dallas, Email: jwhsu@utdallas.edu, Tel: (972) 883-5789.

### Dr. Partha De

Assistant Professor of Computer Science at UT Dallas, **Email:** pxd141430@utdallas.edu, **Tel:** (972) 883-4239.