Nick DiSanto

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Education

Vanderbilt University Jan. 2025 – Present
PhD in Computer Science
GPA: –/–.

California Baptist University Aug. 2019 – Apr. 2023
B.S. in Computer Science, *summa cum laude*
GPA: 4.0/4.0. Ranked #1 in graduating class.

Experience

Vanderbilt Medical Image Computing Lab Jan. 2025 – Present
PhD Student
- Building OCT mosaicking and denoising models to track ROP progression in infants.

GE Vernova Jan. 2024 – Jan. 2025
Software Engineer
- Led the wildfire forecasting initiative, including the training, visualization, and productization of ML pipelines with power grid applications.
- Presented results of wildfire analytic application to the C-Suite, securing significant funding for further integration.
- Honored as a 2024 GE Vernova Changemaker for contributions towards integrating GenAI analytics into production-level code.

CalBaptist ML & NLP Lab Jan. 2022 – Dec. 2023
Lead Undergraduate Researcher
- Built representation models to find empirical patterns in unstructured online data, challenging the necessity of complex algorithms for natural language pattern recognition
- Proposed a novel data preprocessing approach that introduces noise and helps medical imaging models better perceive their environments, increasing accessibility for low-income communities
- Produced analyses and applications for three papers, leading the team from inception to execution

Sirch Sep. 2023 – Dec. 2023
NLP Consultant
- Built models that perform Query Auto-Completion (QAC), information retrieval, and NLU
- Scaled product to efficiently handle increasing foot traffic while maintaining a personalized UI

General Electric June 2022 – Aug. 2023
Software Engineering Intern
- Led the deployment of a database cleanup initiative that saves thousands of dollars per year
- Developed and optimized microservices for large-scale data ingestion and analytic applications

Keysight Technologies June 2021 – Aug. 2021
Software Engineering Intern
- Created a web platform and built applications to enable clients to customize their products
- Used T-SQL to perform data analysis and eliminate 40% of product-option configurations

Publications & Preprints

Spatial Analysis of Social Media's Proxies for Human Emotion and Cognition.
A Corso, **N DiSanto**, N Corso, E Lee. *iConference 2024*. [code]

Transcending the Attention Paradigm: Representation Learning from Geospatial Social Media Data.
N DiSanto, A Corso, B Sanders, G Harding. *arXiv preprint arXiv:2310.05378*, 2023. [pdf] [code]

Leveraging Contextual Data Augmentation for Generalizable Melanoma Detection.
N DiSanto, G Harding, E Martinez, B Sanders. *arXiv preprint arXiv:2212.05116*, 2022. [pdf] [code]

Beyond Interpretable Benchmarks: Contextual Learning through Cognitive and Multimodal Perception.
N DiSanto. *arXiv preprint arXiv:2304.00002*, 2022. [pdf]

Teaching Experience

EGR121: **Intro to C++**, *Teaching Assistant*	SP 2023
EGR225: **Discrete Structures**, *Teaching Assistant*	FA 2022
CSC312: **Algorithms**, *Tutor*	SP/FA 2022
EGR329: **Computer Architecture**, *Tutor*	SP/FA 2022
PHY201: **Physics for Engineers**, *Teaching Assistant*	SP/FA 2021

Service

Reviewer

- *Decision Support Systems*, 2023
- *Mathematics*, 2022

Awards & Honors

2024 GE Vernova Changemaker (selected out of 2400 nominees)	Nov. 2024
CS Outstanding Student Award (ranked #1/40)	Apr. 2023
Inducted into Alpha Chi Honor Society (top 10%)	Apr. 2022
Physics Performance & Leadership Award	Dec. 2021
President's List (every semester of undergraduate study)	FA 2019 – SP 2023
Trustee Merit Scholarship	FA 2019 – SP 2023
Engineering Excellence Scholarship	SP 2021 - SP 2023

Leadership & Outreach

Founder and President of CBU Chess Club.

Member of CBU's Association for Computing Machinery (ACM) Chapter.

Lead trumpet and section leader in 4 competitive CBU musical ensembles.

Set up a newly opened high school's computer lab.

Performed STAR test data analysis for an elementary school in a low-income area.