

# David Oniani

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Visit [oniani.ai](https://oniani.ai) for my papers, software, and more! I also make [YouTube videos](#) about AI and Software Engineering

## EDUCATION

- [Luther College](#) Decorah, IA  
B.A. Computer Science, Mathematics (magna cum laude) Aug. 2017 – May. 2021

## TECHNICAL SKILLS AND NATURAL LANGUAGES

- Languages: Python, Rust, Shell Script, Modern C++, PostgreSQL, Lua, Haskell, JavaScript, Markdown,  $\LaTeX$ , HTML, CSS
- Tools and Libraries: Linux, Neovim, Git, Docker, PyTorch, Transformers, scikit-learn, matplotlib, numpy, pandas, Flask, Zola
- Theory: Applied Statistics, Deep Learning, Information Theory, Linear Algebra, Multivariable Calculus, Real Analysis, Topology
- Natural Languages: English (Native Proficiency), Georgian (Native Proficiency), Russian (Native Proficiency)

## WORK EXPERIENCE

- [University of Pittsburgh](#) Work Remotely from Brooklyn, NY  
Machine Learning Research Scientist Feb. 2022 – Present
  - First-authored papers accepted at major AI/ML and health informatics conferences and journals
  - Led engineering and system design efforts for CDM-compliant research data warehouse (ReDWINE)
  - Automated [Extract, Transform, Load \(ETL\)](#) pipelines manipulating hundreds of GBs of data
  - Researched [Few-Shot Learning](#) and [Transformers](#) for accurate and efficient text classification
- [DawnLight](#) Palo Alto, CA  
Research Engineer Apr. 2021 – Jan. 2022
  - Developed and maintained AI sensing inference runtime for audio and radar (C++ codebase)
  - Architected and trained highly performant [CNN](#)-based DL model for human activity detection
  - Implemented Python APIs and data engineering pipelines for interacting with data platforms
  - Together with Principal Scientist, wrote C++ library of signal processing algorithms (libdsp)
  - [DawnLight](#) was [Sequoia Capital](#) Backed [Ambient Intelligence](#) and [Edge Computing Startup](#)
- [Mayo Clinic](#) Rochester, MN  
Artificial Intelligence Researcher Feb. 2020 – Sept. 2020
  - First-authored papers accepted at leading AI and health informatics conferences and journals
  - Built [chatbot](#) as extension of [GPT-2](#) model by applying [BERT](#), BioBERT, USE, and [tf-idf](#)
  - Utilized [node2vec](#) for generating COVID-19 network embeddings and built [co-occurrence network](#)
  - Worked directly under [Dr. Feichen Shen](#) and [Dr. Yanshan Wang](#) in division of [Dr. Hongfang Liu](#)

## SELECT PUBLICATIONS

- [A Qualitative Evaluation of Language Models on Automatic Question-Answering for COVID-19](#)  
Proceedings of the 11th ACM International Conference on Bioinformatics, Computational Biology and Health Informatics (ACM-BCB), 2020  
First Author, 31 citations
- [Constructing Co-occurrence Network Embeddings to Assist Association Extraction for COVID-19 and Other Coronavirus Infectious Diseases](#)  
Journal of the American Medical Informatics Association (JAMIA), 2020  
First Author, 19 citations
- [Toward Improving Health Literacy in Patient Education Materials with Neural Machine Translation Models](#)  
American Medical Informatics Association (AMIA) Informatics Summit, 2023  
First Author, recent article
- [Social and Behavioral Determinants of Health in the Era of Artificial Intelligence with Electronic Health Records: A Scoping Review](#)  
Health Data Science (HDS), 2021  
Co-Author, 8 citations

## HONORS AND AWARDS

- National Interest Waiver (NIW) Green Card Immigrant Petition Approval for [Exceptional Ability](#), USCIS (2022)
- Dean's List Recipient, [Luther College](#) (2017 – 2021)
- Recipient of Multiple Highly Competitive Scholarships, [Luther College](#) (2017 – 2020)
- Recipient of 2 Dean's Office Summer Research Awards, [Luther College](#) (2018, 2019)
- Gold Medal for Academic Excellence, [Ministry of Education and Science of Georgia](#) (2016)
- Multiple-Time Finalist, [National Mathematics Olympiad of Georgia](#) (2011 – 2016)
- 7<sup>th</sup> Place (TOP 10), [National Mathematics Olympiad of Georgia](#) (2014)
- IMO & IPhO Nominee, [Ministry of Education and Science of Georgia](#), (2014)