



# Nathan Wendt

ML Engineer/ Full Stack Dev

- 9 February 1990
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## About me

I am an engineer with over 4 years experience in software development, deep learning, and web applications. I have been involved in every stage of project development from defining scope and needs analysis to researching and prototyping to shipping fine tuned applications at scale. I have experience in both front and back end development as well as managing data pipelines at scale. Most recently, I have been focused on full-stack web development. I am looking for remote contract and freelance positions which enable me to work unconventional hours and look forward exploring how I might fight into your company's workflow.

## Skills

- Javascript, React, Python, Pytorch
- NextJS, HTML, tailwind, Data Visual
- SQL, MongoDB, Data Science, Bash
- SLURM, Neo4j, CSS

## Expertise

- Full Stack Web Design
- Database Management
- Data Visualization
- Linux, SLURM, Cloud Computing
- Deep Learning (RL, CV)
- Graph Databases

## Experience

9/23-present Freelance Prompt Engineer DataAnnotation

- Develop code related prompts to contrast multiple LLM responses.
- Identify model limits and report on shortcomings.
- Edit model responses for further fine tuning.

8/19-12/22 ML Engineer and Data Scientist Pacific Northwest National Labs

- Computer Vision Transformer
- Developed a transformer network with a Resnet backbone to identify and localize anomalous objects in x-ray images.
- Merged bash and SLURM scripts to network 64 GPU clusters for simultaneous data exchange.
- Managed online datab pipeline via MongoDB
- Packaged and deployed ensemble for sponsor with UI and heat map overlays.
- Explainability in Computer Vision
- Implemented Deep K-nearest neighbors (DKNN) and Testing with Concept Activation Vectors (TCAV) which cluster intermediate activations of DNN's to explain model decisions, identify biases, and improve calibration.
- Knowledge-Graph Article Recommendation
- Used an open source NLU model for entity-relation identification to populate a neo4j graph from news articles.
- Develop UI for sponsors to interact with including feedback submissions.
- Topic Clustering Tweets in Twitter social network
- Designed a novel model utilizing BERT Transformer encoders to cluster misinformation tweets by topic
- Leverage multi-task learning with weak signals (# hashtags, @ references, shared URL's, and social network information) to form topic clusters without explicit labels

6/18-8/18 OSSI Intern NASA Ames Research Center

- Tasked with building a tool to simulate cyber-physical attacks on the SMART-NAS air traffic control simulator
- Designed, implemented, and integrated a java based software tool
- Major design focuses included modularity, extensibility, and ease of use
- Final product was compact, versatile, and exceeded expectations
- Learned an extensive API and produced results within an 8 week program

## Projects

2024 Portfolio Site Link

- Simple website demonstrating capabilities
- Utilized NextJS, tailwind CSS, React, HTML, SVG, JSON, SQL

## Education

2017-2019 M.S. in Electrical Engineering Washington State University  
*Major: Control Systems*  
*Minor: Computer Science*