

## TECHNICAL SKILLS

### Programming

Python, SQL, TypeScript, JavaScript, R, C++

### Deep Learning

PyTorch, TensorFlow, Spatial-Temporal Transformers, GRU/RNN, 3D CNNs, Geometric Attention

### ML & Data Science

scikit-learn, XGBoost, Pandas, NumPy, Ensemble Methods, Feature Engineering

### Cloud & Deployment

AWS (Certified), Multi-GPU Training, Mixed Precision, Docker, Flask, FastAPI

### Homelab & Systems

Proxmox, pfSense, n8n, RAG Pipelines, 10Gb Networking, Ubuntu Server

### Specializations

Trajectory Prediction, 3D Medical Imaging, Computer Vision, NLP, Multi-modal AI

## EDUCATION

### MS, Data Science & Analytics

*Western Governors University*

Aug 2024 - Aug 2025

Healthcare AI Capstone (Production)

### BS, Data Analytics

*Western Governors University*

Mar 2023 - Sep 2024

NFL Prediction Capstone

### AS, IT / Programming + Data Analytics Cert

*Clinton Community College*

Jan 2022 - Dec 2022

### AA, Art Studies

*Hawkeye Community College*

Sep 2019 - Dec 2020

## CERTIFICATIONS

- CompTIA Data+ (2024-2027)
- AWS Cloud Practitioner (2024-2027)
- CompTIA A+ (2023-2026)
- Udacity: Deep Learning, CV, GANs, CNNs, Transformers, ML DevOps

## HONORS

- National Society of Leadership and Success
- Phi Theta Kappa Honor Society
- Eagle Scout

## PROFESSIONAL SUMMARY

Data Scientist with an MS in Data Science who builds things that actually work. I enjoy building and training models on my own multi-GPU homelab, deploying new techniques, and discovering unique ways to solve problems. Whether it's analysis, research, or projections, I dig into how something ticks, figure out why, and extract information that drives better outcomes. My multi-node homelab stack lets me run production applications, train models, and run MLflow, all on my own hardware. 20+ projects on GitHub covering deep learning, medical imaging, NLP, computer vision, and analytics.

## FEATURED PROJECTS

### NFL Big Data Bowl 2026 | Kaggle Bronze Medal



*Player Trajectory Prediction | Top 8% of 1,134 teams*

- **Bronze Medal** in prestigious Kaggle competition predicting NFL player trajectories
- Conducted 847+ experiments across 15+ architectures (ST Transformers, GRU, CNN, Perceiver IO)
- Best ensemble: 3-model blend achieving 0.540 Public LB with architecture diversity strategy
- Engineered 167 features (kinematics, ball-relative, temporal, geometric with Voronoi tessellation)

### RSNA Intracranial Aneurysm Detection | Kaggle Competition

*3D Medical Imaging Deep Learning | 105 Models Trained*

- Trained 105 models (21 architectures  $\times$  5 folds) for CT angiography aneurysm detection
- Best ensemble AUC 0.8624 with discovery that smaller models outperform larger on limited medical data
- Built complete pipeline: DICOM  $\rightarrow$  NIFTI  $\rightarrow$  ROI extraction  $\rightarrow$  Training  $\rightarrow$  Ensemble on 4 GPUs

### Apollo Healthcare Connect | apollohealthcareconnect.com

*Production Multi-modal AI Healthcare Triage | MS Capstone*

- Live production healthcare AI triage achieving **93.8% accuracy** with sub-second response
- 5-model ensemble combining DistilBERT (NLP) and CNNs; handled 29.7:1 class imbalance
- Full production pipeline with Flask API, AWS S3, and safety protocols

### Missing Persons Outlier Detection

*Geospatial Crime Pattern Analysis | 41,200 NamUs Cases*

- 7 statistical methods + 3 ML models detecting trafficking corridors at up to 46.86 $\sigma$  significance
- I-35 corridor acceleration: 170% increase in missing persons, structural break at 2020
- Live Streamlit dashboard with spatial autocorrelation (Moran's I), ARIMA forecasting, and LISA clustering

### Opportunity Intelligence Assistant

*Agentic AI Market Analysis | Senior Living | 14 Statistical Analyses*

- 3-call LLM pipeline directing 22 statistical methods across Census Bureau and CMS public data
- Scored Des Moines market 48.3/100; 622-word executive briefing with citation tags on every claim

## PROFESSIONAL EXPERIENCE

### Freelance Data Science Consultant

*Thompson Parking & Mobility Consultants — Current*

- Develop AI-powered Excel analytics platform enabling natural language data queries
- Design custom analytical solutions and machine learning models for client challenges
- Support data-driven decision making through advanced analytics and predictive modeling

### Continuous Improvement Leader & Material Flow Specialist

*John Deere, Waterloo Works & Ankeny Works — 2005-2020, 2021-Present*

- CI Department Representative leading process improvement and operational efficiency initiatives
- Designed and implemented Zones Project, modernizing material flow training systems
- Led departmental CI mapping initiatives improving operational efficiency and reducing cycle times
- Managed supply chain logistics and SAP-integrated inventory systems