

# LARS OSTERVOLD

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## SUMMARY

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Results-driven Data Scientist with 5+ years of experience in developing and deploying AI-powered solutions. Expertise in machine learning, deep learning, and GenAI, with a proven track record of building scalable data pipelines and delivering impactful data-driven insights. Proficient in Python and cloud technologies.

## TECHNICAL SKILLS

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**Programming & Scripting:** Python (6+ years), SQL, R, JavaScript (Node.js, TypeScript), Bash, Linux

**Machine Learning & Deep Learning:** TensorFlow, PyTorch, scikit-learn, Neural Networks (CNNs, RNNs), model training/tuning, production deployment

**Data Science & Engineering:** Pandas, NumPy, SciPy, ETL, data cleaning, algorithm optimization

**Cloud & DevOps:** GCP, Azure, AWS, Docker, CI/CD pipelines

## TECHNICAL EXPERIENCE

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**Computational Modeling Scientist | The Dow Chemical Company** April 2023–Present

- Developed and deployed deep learning models (TensorFlow, PyTorch) for molecule discovery, reducing search time by 87% and contributing to a patented innovation.
- Built and productionized AI-powered compliance chatbots (Python, Streamlit, OpenAI APIs), reducing lookup times by 10+ hours per review.
- Designed and deployed a \$40MM NPV machine learning-driven customer web app (R Shiny, Python) with backend services deployed via Docker on Azure, supporting 400+ users.
- Recognized as top 5% of internal developers, earning Dow's 'Champion' Coder certification.

**Chief Technology Officer | LION Software** May 2024–March 2025

- Spearheaded the development and deployment of a scalable data visualization and analytics platform, ensuring high performance and reliability for 100+ users.
- Optimized complex graph network algorithms, reducing computational complexity from  $O(n^2)$  to  $O(n \log n)$  to support real-time data insights.

**Ph.D. Researcher | The Pennsylvania State University** January 2021–March 2023

- Designed and automated high-performance computing (HPC) simulations, boosting reaction yields by 288% while reducing manual run time by over 340%.
- Developed Python algorithms for instrument data preprocessing, cleaning, transformation, and report generation—saving 3 hours per run and enhancing data reliability for experimental workflows.

## PROJECTS

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**Retail Analytics Dashboard ([Repo](#), [Dashboard](#))**

- Developed an interactive retail analytics dashboard with advanced forecasting, product analysis, customer segmentation, and market insights using Python, XGBoost, TensorFlow, and Streamlit.

**Baptized Technology ([Repo](#), [Website](#))**

- Designed and deployed scalable full-stack (Next.js) AI chatbots using a Retrieval-Augmented Generation (RAG) stack and cloud-based NLP solutions, handling 600+ monthly queries.

## EDUCATION

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**Ph.D., Chemical Engineering (with focus on Machine Learning & Computational Modeling) | The Pennsylvania State University | 2023** GPA: 4.00

**M.S., Chemical Engineering | University of Arkansas | 2020** GPA: 3.98

**B.S., Chemical Engineering | University of Oklahoma | 2018** GPA: 3.85

**Continued Education:** Machine Learning Certification (Coursera, 2025), Deep Learning Certification (Coursera, 2025), Data Structures and Algorithms Certification (Packt, 2025)