Luke Wilsen

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LinkedIn | GitHub

Data Scientist and Top Secret Security Clearance candidate, specializing in machine learning, with expertise in predictive modelling and AI-driven decision support. Strong experience applying Python, PyTorch, and Scikit-Learn to structured and unstructured datasets, and proficient in deploying machine learning models using MLOps tools such as Docker, FastAPI, and Streamlit.

EDUCATION

University of Massachusetts Amherst Amherst, MA
School of Public Health and Health Sciences
Bachelor of Science in Public Health with a concentration in Bio Statistics *May 2024*

- Cumulative GPA: 3.75; Dean's List

Master of Science in Bio Statistics *Candidate, May 2025*
Relevant Coursework: Statistics, Multivariable Calculus, Applied Linear Algebra, Predictive Analytics with Python

EMPLOYMENT

Iron Eagle X Tampa, FL
Data Science Intern *January 2024 – Present*

- Completed a comprehensive Data Science Development Program covering related Python libraries, data preprocessing, machine learning and industry standard coding and code checking practices.
- Developed and deployed machine learning models using PyTorch, TensorFlow, and Scikit-Learn, applying deep learning and NLP techniques for AI-driven analytics.
- Designed end-to-end ML pipelines with Flask APIs and Docker, ensuring scalable and efficient deployment.
- Built Streamlit-based applications to visualize AI outputs, enhancing accessibility for stakeholders.

Prapela Biddeford, ME
Statistical Consultant *September 2023 – Present*

- Conducted statistical analysis using Python and R to inform decision-making in business and compliance contexts.
- Reviewed, developed, and completed a statistical analysis of sensor data demonstrating the stimulation equivalency of pilot clinical and production medical devices.
- Advised a FDA De Novo classification submission package requesting clearance of this novel pediatric FDA – awarded Breakthrough Device Designation.

Dimensional Insight Burlington, MA
Healthcare Business Intelligence Analyst Intern *May – August 2023*

- Developed pricing and revenue analytics dashboards using CMS claims, improving data visibility for hospital administrators by 25%.
- Worked cross-functionally with analysts and key stakeholders to interpret customer data insights.
- Collaborated with a team of analysts from different teams to tailor dashboards to specific customer needs.

SKILLS

Programming Languages: R (3 years), Python (3 years), SQL (1 year).
Machine Learning & NLP: Scikit-Learn, PyTorch, TensorFlow, Hugging Face Transformers, Generative AI (ChatGPT, BERT), Prompt Engineering, Large Language Models, Deep Learning, Text Classification.
MLOps & Deployment: Docker, Docker Compose, FastAPI, Flask, Model Deployment, Streamlit, Git
Data Management: ETL Processes, Data Warehousing, SQL Management, SQLite3.
AI & NLP: Natural Language Processing, Artificial Intelligence, Prompt Engineering, Large Language Models, Deep Learning, Neural Networks.
Tools & Platforms: Docker, Docker Compose, Git, Streamlit, Fastapi, Flask API, Microsoft Suite, SAS, Stata, Tableau, Power BI, Azure.
Soft Skills: Communication, Collaboration, Problem-Solving, Analytical Thinking, Conversational French.

PROJECTS

- **Titanic Survival Prediction**: Utilized machine learning techniques to create a predictive model for passenger survival on the Titanic, involving data cleaning, feature engineering, and model selection.
- **Ames Housing Price Prediction**: Developed a regression model to predict house prices in Ames, Iowa, incorporating data preprocessing, feature selection, and model evaluation.
- **IMDB Movie Sentiment Analysis**: Developed an NLP-based sentiment classification model using deep learning to classify movie reviews as positive or negative, involving text cleaning, feature extraction, and sentiment analysis.
- **MNIST Handwritten Digit Recognition**: Implemented a neural network to recognize handwritten digits from the MNIST dataset, including data loading, model architecture design, and training/evaluation procedures.