

Luke Salamone 414-875-7293

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Artificial Intelligence Master's student with a focus in data science, natural language processing and large language models. Currently pursuing full-time machine learning engineer roles.

TECHNICAL SKILLS

Programming: Python, Spark, Java, C++, Javascript, SQL
Packages: PyTorch, Tensorflow, Keras, OpenCV, MXNet, Scikit-Learn
Tools: AWS, Azure, GCP, Heroku, CI/CD, Version control (Git), Google Analytics

CERTIFICATIONS

- **AWS Certified Solutions Architect** December 2017
- **Certified Software Security Engineer (Capital One)** October 2018

EDUCATION

Master of Science (M.S.) - **Artificial Intelligence, Northwestern University** Fall 2021
Bachelor of Science (B.S.) - Computer Science, **University of Wisconsin - Madison**

PROJECTS

Deep Q-Trading Agent - Traded stocks with multi-branch deep reinforcement learning agents, training 3 neural network architectures. Reference paper: Replication of paper by Jeong et al.

- Model beats market by 144% on test range using transfer learning to maximize profits.

LSTM Language Model - Trained artificial recurrent neural network (RNN) to generate text in an unsupervised learning environment. Network architecture inspired by Zaremba et al.

- Achieved generation perplexity of 158 on Wikitext-2 and 76 on NYT corpus.

GMM Classifier - Model used to classify MNIST digits into 10 different classes as an unsupervised learning clustering task. Segmentation model was then used to generate new images.

- Accuracy of 62% in digit classification task using class-balanced dataset.

LEADERSHIP EXPERIENCE

Machine Learning Engineer Intern, **Encyclopedia Britannica** Summer 2021

- Implemented state-of-the-art conversational chatbot utilizing knowledge retrieval. Chatbot now available to over 100 million monthly users.
- Improved website search results by 37% (MRR) through optimization of ML model.
- Contributed to Facebook open-source research platform through resolution of software bugs.

Senior Software Engineer, **Capital One** February 2017 - February 2020

- Built data recommendation tool facilitating 30% of all internal Capital One metadata inquiries utilizing a hierarchical classification machine learning system.
- Reduced ETL costs 90+% by building a performant Java library for high-volume data streaming.
- Reduced errors by 95+%, lead development of serverless app for data integrity / reporting.