Ali Shahed

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Summary

Seasoned Principal Machine Learning Engineer with a Ph.D. in Electrical Engineering and over 7 years of experience in the design, implementation, and deployment of various Machine Learning models. Expertise in Natural Language Processing (NLP), Large Language Models (LLM), Deep Learning, and cloud-based ML technologies. Proven ability to drive the complete lifecycle of model development, from data collection to deployment.

Skills

Machine Learning & NLP
Large Language Models (LLM)
Deep Learning & Neural Networks
Model Development Lifecycle
Cloud-based ML technologies: AWS, Google Cloud Platform
Python, Matlab
SQL (Postgres, MySQL), NoSQL (Amazon DynamoDB)
PyTorch, TensorFlow, Keras, Scikit-learn
Data Visualization
Data Dashboard (Streamlit)
Data Analysis & Problem Solving

Work Experience

Founder Engineer
Stealth Startup | January 2023 – October 2023
Developed two consumer products leveraging Large Language Models (LLM), both ChatGPT API and open source models, driving the full model development lifecycle from inception to production.
Utilized deep learning techniques and NLP to enhance product efficiency and performance.
Managed cloud-based ML technologies for scalable model deployment and maintenance.
Collaborated with cross-functional teams, ensuring alignment of ML strategies with overall business objectives.

Principal Engineer
Meta | November 2021 – January 2023
Developed and implemented link-level simulations for 5GNR, leveraging machine learning approaches such as decision tree regression and K-nearest neighbor.

Contributed to system level simulation development, leading to strategic proposals for 3GPP WG4. Utilized Python and SQL for data analysis and model implementation.

Principal Data Scientist
Freedom Financial Network | January 2020 – November 2021
Led the development, evaluation, and monitoring of predictive machine learning models for optimization of marketing and sales funnels for a loan business unit.
Employed ML frameworks such as TensorFlow and PyTorch for model development.
Supported the business unit in designing and evaluating A/B experiments.

Senior Machine Learning Engineer
Asurion | March 2018 – December 2019
Implemented a machine learning-based network attack detection model, successfully identifying abnormal behaviors in WiFi networks.
Led the R&D effort on device discovery and device operation mode classification in WiFi networks, utilizing sequential Neural Networks (RNN and LSTM).
Managed end-to-end design and implementation of weekly data insight bulletins for Asurion Smart Home pilot customers.

NLP Engineer
Protagonist Technology | January 2017 – February 2018
Developed pipelines for unsupervised document clustering and document classification.
Utilized SVM and Logistic Regression Classifier for effective document classification.
Implemented community detection algorithms based on agglomerative clustering methods and Latent Dirichlet Allocation (LDA).

Senior Staff Engineer
Maxlinear | September 2013 – June 2016
Executed the design of various DFE blocks, encompassing everything from architectural design to chip initiation.
integrated digital predistortion (DPD) into multiple wired and wireless transmitters. These designs have been incorporated into the final chip layouts, enhancing the efficiency of the associated power amplifiers by 20-30%, depending on the application.
Developed an efficient, flexible variable-rate resampler, ensuring a consistent output sampling rate even with variable baud-rate input signals.
Designed an automatic gain control for cable modem receivers. I collaborated closely with ASIC engineers throughout the design and verification processes at both block and system levels.
Created and conducted FPGA verification tests for these designs.
Participated in lineup analyses for several chips in collaboration with system engineers and attended meetings where I demonstrated our products to customers and suppliers.

Education

PhD in Communications Engineering, Tampere University, Tampere, Finland
MSc in Electrical Engineering, Tampere University, Tampere, Finland