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QUALIFICATIONS SUMMARY

Staff Data Engineer at Dexcom, **Ex-Machine Learning Engineer** at Micron Technology with a **Ph.D. in Computing**, and both **B.Sc. and M.Sc.** degrees in computer science. A former software engineer who believes in artificial intelligence and prefers **Cloud Infrastructure** for developing and deploying **Scalable AI** solutions.

SKILLS OVERVIEW

- **Programming:** Python, Javascript, Java, C/C++, SQL, Go, R, PHP, HTML, CSS, Shell, Matlab
- **Data Science:** Statistical Analysis, EDA (Exploratory Data Analysis), Data Visualization, Probability Distributions, Hypothesis and Significance Test, Bayesian Statistics, PySpark, Cloud Dataproc, Pandas, Data/Looker Studio, Jupyter Notebook, Streamlit, Tableau, Microsoft Power BI
- **Data Engineering:** ETL/ELT (Extract, Transform, Load), BigQuery, SQLite, MySQL, SQL Server, PostgreSQL, SQLAlchemy, Cloud SQL, Apache NiFi, DBT, Dataplex, Stream and Batch Data Ingestion
- **Machine Learning:** Linear Regression, Logistic Regression, Support Vector Machine, Decision Tree, Random Forest, Naive Bayes, K-Nearest Neighbors, K-Means, Principal Component Analysis, Ensemble Learning, Numpy, pandas, matplotlib, scikit-learn, XGBoost, Spark MLlib, AutoML
- **Deep Learning:** CNN (Convolutional Neural Network), LSTM (Long Short Term Memory Network), Encoder-Decoder Model, Transformer Model (BERT, GPT), GAN (Generative Adversarial Network), NLP (Natural Language Processing), LLM (Large Language Model), Anomaly Detection, Time Series Forecasting, Recommender Systems, Tensorflow, Keras, Pytorch, Spacy, NLTK, Hugging Face
- **MLOps:** git, Docker, Jenkins, GCP (Google Cloud Platform), Vertex AI: Pipeline (Kubeflow), Feature Store, Model Registry, Prediction Endpoint, A/B Testing, Auto ML, Cloud Composer (Airflow), Dataflow (Beam), Cloud Functions, Pub/Sub, Cloud Storage, Cloud Build CI/CD, Terraform, Model Deployment and Monitoring
- **Software Development:** Flask, FastAPI, Microsoft Power Platform, Agile, Test Driven Development

INDUSTRY EXPERIENCE

Staff Data Engineer | Dexcom Inc. (May 2023 – Present | San Diego, CA, USA)

- Optimizing Data Infrastructure: Streamlining and upgrading Dexcom's data infrastructure within its Manufacturing Organization using modern cloud-based technologies from various providers.
- Data Mesh and Governance: Collaborating with data owners across business units to implement a robust Data Mesh framework and ensure effective Data Governance.
- Future-Proofing: Proactively adopting modern and scalable technologies to future-proof the data infrastructure.
- Generative AI Integration: Leading the integration of GenAI tools, including OpenAI, Google PaLM, and various LLM-based solutions, to enhance descriptive, prescriptive, and predictive analytics across operations.
- Cross-Functional Collaboration: Facilitating seamless communication and collaboration between the Operations Intelligence team and other business units for effective data integration.

Machine Learning Engineer | Micron Technology Inc. (June 2021 – March 2023 | Boise, ID, USA)

- Developed cloud-native ML pipelines with high scalability, availability, and usability, resulting in a 30% reduction in maintenance costs.
- Utilized state-of-the-art tools and technologies to build and deploy end-to-end ML pipelines through CI/CD process, resulting in a 40% reduction in deployment time.

- Built production-ready ML pipelines for stakeholders using custom-designed models and Cloud AutoML, resulting in a 25% increase in overall process efficiency.
- Designed and implemented Data (ETL and ELT) pipelines in On-prem and Cloud to integrate with various ML pipelines, resulting in a 20% increase in data preparation speed.
- Actively collaborated with the front-end development team to improve the user interface and experience of the ML solutions, resulting in a 15% increase in user satisfaction.
- Maintained observability, monitoring and interpretability of ML models at all stages of the life cycle.

Data Science - Intern | Micron Technology Inc. (May 2020 – August 2020 | Boise, ID, USA)

- Worked on developing machine learning based predictive models that explain and predict hiring outcomes, productivity, engagement, and retention.
- Developed 3 re-usable NLP models that are roughly 12% better in terms of accuracy and interpretability than that of the baselines by utilizing hybrid neural network architecture on top of millions of rows of data.

Back End Developer - Remote Freelance | Mobbazaar Inc. (Jan 2015 – Aug 2015 | San Jose, CA, USA)

- Developed backend APIs for Single Tap Communication App for iOS using Slim and Django along with MySQL and PostgreSQL. Later migrated to Tornado for a 50X boost in availability.

Software Engineer | Wneeds Ltd. (Feb 2012 – Jan 2015 | Dhaka, BD)

- Worked on enterprise-level web, mobile, and back-end applications with technologies such as AngularJS, Laravel, Codeigniter, and Objective-C.

EDUCATION AND RESEARCH EXPERIENCE

Doctor Of Philosophy (Ph.D.) | Computing

Boise State University | Jan 2018 – August 2021 | 3.72/4.00 | Boise, ID, USA

- Identifying Privacy Disclosures in Natural Language Text:
Implemented LSTM and Multi-channel Convolutional Neural Network to precisely detect private information disclosures in texts. Utilized underlying linguistic features, word embedding, and sequence learning.
- Investigating Human Privacy Behavior through Descriptive and Predictive Analysis:
Created scientifically grounded methods and ML models to explain and understand human privacy behavior.

Master Of Science (M.Sc.) | Computer Science

Lamar University | Aug 2015 – Aug 2017 | 3.64/4.00 | Beaumont, TX, USA

- Deep Neural Network for Autonomous Vehicle Systems (MS Thesis):
Implemented Deep Convolutional Neural Network for predicting steering angle in autonomous vehicle systems. Utilized car simulator and augmentation for collecting driving data to train the model.

Bachelor Of Science (B.Sc.Eng.) | Computer Science And Engineering

Rajshahi University of Engineering and Technology | Rajshahi, Bangladesh

RELEVANT PUBLICATIONS

1. Privacy as a Planned Behavior: Effects of Situational Factors on Privacy Perceptions and Plans. 2021 (**1st Author**) *ACM UMAP '21 – User Modeling, Adaptation, and Personalization*.
2. A Multi-Input Multi-Output Transformer based Hybrid Neural Network for Multi-Class Privacy Disclosure Detection. 2021 (**1st Author**) *MLNLP '21*.
3. A User-Centric and Sentiment Aware Privacy-Disclosure Detection Framework based on Multi-input Neural Network. 2020 (**1st Author**) *PrivateNLP '20. Workshop on Privacy in NLP @WSDM 20*.
4. FALCON: Framework for Anomaly Detection in Industrial Control Systems. 2020 (**2nd Author**) *MDPI*.
5. Privacy Disclosures Detection in Natural-Language Text through Linguistically-motivated Artificial Neural Network. 2019 (**1st Author**) *SPNCE '19*.