A K M Nuhil Mehdy

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QUALIFICATIONS SUMMARY

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** tools, following the **micro-service** architecture.

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, MongoDB, SQLAlchemy, Cloud SQL, Apache NiFi, 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), 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 -** Django, Flask, FastAPI, Node.js, Express, Agile, Test Driven Development

INDUSTRY EXPERIENCE

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 ~1 million rows of unstructured textual data from in/outside of Micron.

Back End Developer - Remote Freelane | **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. Successfully worked on enhancing the scalability for up to 3X with technologies such as Apache Solr, NoSQL, and Load Balancing.

EDUCATION AND RESEARCH EXPERIENCE

Doctor Of Philosophy | 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 for sentence-level analysis.
- Investigating Human Privacy Behavior through Descriptive and Predictive Analysis:
  Created scientifically grounded survey methods and ML models to explain and understand human privacy decision-making behavior.
- Anomaly Detection in Time Series Data (Mentoring Project):
  Developed a Deep Learning based anomaly detection model for identifying real-time anomalies.

Master Of Science | 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 | Computer Science And Engineering

Rajshahi University of Engineering and Technology | Rajshahi, Bangladesh

- An IoT (Internet of Things) based project to control remote hardwares through the Internet.

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.

OPEN SOURCE CONTRIBUTIONS

Creator and Main Coordinator | HowToCode.dev, An Open-source MOOC (Massive Open Online Course) initiative