A K M Nuhil Mehdy

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QUALIFICATIONS SUMMARY

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 the cloud infrastructure for developing software and machine learning based AI tools, following the micro-service architecture.

SKILLS OVERVIEW

- **Programming -** Python, Javascript, Java, C/C++, SQL, R, PHP, HTML, CSS, Shell, Matlab
- **Data Science -** Statistical Analysis, EDA (Exploratory Data Analysis), Data Visualization, Probability Distributions, Hypothesis and Significance Test, Bayesian Statistics, Streamlit, Pandas
- **Data Engineering -** ETL (Extract Transform Load), BigQuery, SQLite, MySQL, SQL Server, PostgreSQL, MongoDB, SQLAlchemy, Cloud SQL, PySpark, Apache NiFi, Jupyter Notebook, Zeppelin, Dataproc, Data Studio, Tableau, Microsoft Power BI
- **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, 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
- **MLOps -** git**,** Docker, Jenkins, Google Cloud Platform, Cloud Build, Vertex AI Pipeline (Kubeflow), Auto ML, Cloud Composer (Airflow), Dataproc (Spark, Hadoop), Dataflow (Beam), Cloud Functions, Cloud Pub/Sub, Cloud Storage, etc.
- **Software Development -** Django, Flask, FastAPI, Node.js, Express, Agile, Test Driven Development

INDUSTRY EXPERIENCE

Machine Learning Engineer | MICRON TECHNOLOGY INC. (June 2021 – Present | 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) 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 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. 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 in the time series data.

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 driving data.

BACHELOR OF SCIENCE | Computer Science and Engineering
Rajshahi University of Engineering and Technology | Rajshahi, Bangladesh

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. Modeling of Personalized Privacy Disclosure Behavior: A Formal Method Approach. 2021
   1st Author. BASS '21. *International Workshop on Behavioral Authentication for System Security @ARES 21*
3. A Multi-Input Multi-Output Transformer based Hybrid Neural Network for Multi-Class Privacy Disclosure Detection. 2021
   1st Author. MLNLP '21. 2nd International Conference on Machine Learning Techniques and NLP.
4. 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.*
5. FALCON: Framework for Anomaly Detection in Industrial Control Systems. 2020
   2nd Author. Journal. *MDPI-Multidisciplinary Digital Publishing Institute, Electronics.*
6. Privacy Disclosures Detection in Natural-Language Text through Linguistically-motivated Artificial Neural Network. 2019
   1st Author. SPNCE '19. *International Conference on Security and Privacy in New Computing Environment.*

LEADERSHIP EXPERIENCE

Founder and Main Coordinator | HowToCode.dev, Open-source MOOC initiative.
President | Bangladeshi Students Association at Boise State University (2019-2020)
Volunteer Team Lead | 2020 IACRC Elections Conference arranged by Idaho Secretary of State.