A K M Nuhil Mehdy

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QUALIFICATIONS SUMMARY

Ph.D. candidate with both B.Sc. and M.Sc. degree in computer science, and former software engineer with around 5 years of experience 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
- **Data Engineering** – ETL (Extract Transform Load), Snowflake, BigQuery, DVC (Data Version Control), Amazon S3, Google Cloud Storage, SQLite, MySQL, SQL Server, PostgreSQL, MongoDB, SQLAlchemy, Cloud SQL, PySpark (Spark, Hadoop), Jupyter Notebook, Zeppelin, Amazon EMR (Elastic Map Reduce), Google 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, Google 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
- **MLOps** – git, Docker, Jenkins, GitHub Actions, CML (Continuous Machine Learning), CI/CD (Continuous Integration and Delivery), Amazon Web Services, Google Cloud Platform (Kubernetes Engine, Cloud Run, Compute Engine), Microsoft Azure
- **Software Development** – Django, Flask, PyQt, Tkinter, RESTful Service, Laravel, AngularJS, Node.js, Express, Agile, Test Driven Development
- **Security Expertise** – Information Assurance, Security Goal, Threat Modeling, Vulnerability Analysis, ICS Kill-chain, OWASP (Open Web Application Security Project), Wireshark

EDUCATION AND RESEARCH EXPERIENCE

PH.D. CANDIDATE | Computing
Boise State University | Jan 2018 – Present (Exp. Aug 2021) | 3.72/4.00 | Boise, ID, USA
- Investigating Human Privacy Behavior through Descriptive and Predictive Analysis
  - Designing and conducting scientifically grounded better survey techniques for eliciting the human privacy decision-making process and privacy behavior. Employing custom machine learning based approaches to better explain and model the observations.
- 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.
- Anomaly Detection in Time Series Data
  - Developed a Deep Learning based anomaly detection model for identifying real-time anomaly in the time series data. Leveraged generative adversarial network for conducting stealthy attacks on continuous variable processes.

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
- B.Sc. Thesis - An Internet of Things project by combining technologies such as web protocols, hardware, and interfacing to remotely control electronic devices (2010).

RELEVANT COURSEWORK

Big Data Computer Systems, Natural Language Processing, Recommender Systems, Advanced Software Engineering, Data Structure & Algorithm, Analysis of Algorithms, Advanced Operating Systems, Cyber Security of Critical Infrastructure, Applied Cryptography, Software Security, Computer Security, etc.

INDUSTRY EXPERIENCE

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 | MOBBAZAAR INC. (Dec 2014 − 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 2011 − Dec 2014 | 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.

PUBLICATIONS

A User-Centric and Sentiment Aware Privacy-Disclosure Detection Framework based on Multi-input Neural Network (1st Author, 2020)
- PrivateNLP 2020. Workshop on Privacy in Natural Language Processing Colocated with WSDM 2020.

Privacy Disclosures Detection in Natural-Language Text through Linguistically-motivated Artificial Neural Network (1st Author, 2018)
- SPNCE 2019. EAI International Conference on Security and Privacy in New Computing Environment.

FALCON: Framework for Anomaly Detection in Industrial Control Systems (2nd Author, 2020)
- MDPI-Multidisciplinary Digital Publishing Institute, Electronics.

Privacy as a Planned Behavior: Effects of Situational Factors on Privacy Perceptions and Plans (Submitted)
- ACM UMAP 2021 − User Modeling, Adaptation and Personalization.

LEADERSHIP EXPERIENCE

Founder and Main Coordinator | HowToCode.dev
President | Bangladeshi Students Association at Boise State University
Volunteer Team Lead | 2020 IACRC Elections Conference arranged by Idaho Secretary of State.