Md Ashikur Rahman
Machine Learning Engineer

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Summary

- Research Interests: Machine Learning and Optimization, Computer Vision, Neural Networks
- Working with some deep network architectures such as U2-Net, Mask R-CNN
- Have little experience working on General-purpose architectures such as Transformers
- On the N2C2 dataset, worked with several open-source Deep Learning projects such as NeuroNER, CORD-NER
- Implemented fundamental supervised/unsupervised ML algorithms such as Linear/Logistic Regression, Decision Tree, Naive Bayes, KNN, SVM, Random Forest, Gradient Decent, etc.
- Actively involved in Problem Solving & Competitive Programming
    - [HackerRank Badge Level: 6 STAR - GOLD; World Ranking: Among Top 1%]
- Working as an Online Applied Machine Learning Enthusiast, predominantly focusing on the fundamental and robust ML Optimization algorithms
- Proficient in Python, Agile/Scrum methodology, and several deep learning frameworks such as TensorFlow, PyTorch & Keras

Technical Skills

- Programming/ Scripting Language/ Architectures Patterns
  – C++, Python, R Scripting, PL/SQL / Microservices
- Database/Data Analysis/Data Modeling
  – MS SQL Server, Amazon DynamoDB, MongoDB, UML
- Software & Tools/ Framework/ Library & Service/ Mathematics
  – PyCharm, Google Colab
  – PyTorch, TensorFlow, TensorBoard
  – LATEX, Amazon S3, Amazon Rekognition
  – Bitbucket, Git, GitHub, MS Planner
  – Linear Algebra, Probability and Statistics, Multivariate Calculus

Research Projects

- Publication(s) (Click to View)
  ✓ Md Ashikur Rahman, Md Arifur Rahman and Juena Ahmed Noshin. Automated Detection of Diabetic Retinopathy using Deep Residual Learning. International Journal of Computer Applications 177(42):25-32, March 2020

- Implemented Deep Learning Projects (Click to View on GitHub)
  ✓ On the N2C2 dataset, worked with several open-source Deep Learning projects such as NeuroNER, CORD-NER where apart from the training & validation process, and developed an algorithm that converts NeuroNER output to WebAnno input format
  ✓ Graph Representation Learning through GraphSAGE (Using Python)
  ✓ Link-Prediction: Inductive Representation Learning on Large Graphs (Using Python)
  ✓ Removing Ambiguous Words and Displaying Relevant Images on Search

Industrial Experience

- **Company**: CutOutWiz (July, 2020 - Present)
  Position: Machine Learning Engineer (Full-time)
  Contributions
  - ✓ To work on Deep Network Architectures for Object Detection and Segmentation
  - ✓ To look for unanswered questions, insights and research limitations & impediments when developing neural architecture
  - ✓ Developing the training & validation procedure to increase the model efficiency
  - ✓ To write optimized & clean codes maintaining design principles using Python

  Projects
  - ✓ Working on deep network architecture, U2-Net, for salient object detection, to improve the efficiency of the "Image Background Removal" & "Ghost Mannequin" effect (Private Repository on GitHub)
  - ✓ Utilized the U2-Net architecture to resize images automatically from Image Masking
  - ✓ Developed Representation Classifier for Facial Recognition using Amazon Rekognition (Private Repository on GitHub)

- **Company**: Smart Technologies (BD) Ltd (September, 2016 – December, 2019)
  Position: Sr. Software Engineer (Full-time)
  Contributions
  - ✓ Designed Microservices Architecture for Supply-Chain Management
  - ✓ Developed the Supply-Chain Management from scratch using .Net Core
  - ✓ Real Time Large Scale Data Synchronization using ASP.NET MVC 4 & SSMS

- **Company**: Proggasoft (March, 2015 - August, 2016)
  Position: Software Engineer (Full-time)
  Contributions
  - ✓ Developed, Debugged and troubleshot for solving technical issues

  Project
  - ✓ Online Contesting Platform for Software Developers - Dev Skill

Kaggle Competition (*TOP 2*) (Problem Solving)

- New York City Taxi Fare Prediction
- Understanding Clouds from Satellite Images

Education

BSc in Computer Science and Engineering
CGPA: 3.87 out of 4.00, American International University-Bangladesh (AIUB)
Undergrad Thesis: Analysis of Sentiment and Extraction of Facts from RSS Feeds

Awards/Scholarships

- Basis National ICT Awards-2020 (CHAMPION)
- APICTA 2021 - The Asia Pacific ICT Alliance Award-2021 (QUALIFIED)
- Academic Award (2015), Magna Cum Laude
- Merit Scholarship (2012-2015), AIUB

Online Courses & Certifications

- Problem Solving (Advanced) – HackerRank
- Problem Solving (Basic) – HackerRank
- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning - Coursera
- Neural Networks and Convolutional Neural Networks Essential Training - LinkedIn