# Abdullah Al Mamun

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Visa status: Green Card

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Google Schoolar

## Skills

- Machine Learning, Deep learning, Model building, offline/online Training, A/B testing, Calibration, Deployment, ML OPs, PyTorch, TensorFlow, Keras, Pandas, Scikit-learn, Python, C/C++, AWS, Google ML Engine, Azure, Spark, Hadoop, NoSQL, Linux, Flask, GPT, CI/CD, Git
- **Soft Skills**: Googling, Problem solving, Good communication, Mentoring; Documentation, Reliable, and Consistent

## Experiences

- **Machine Learning Engineer** — Menlo Park, CA, USA
  *Meta* — *05/2022–Current*
  - Lead ranking engineer; Personalized shopping Ads ranking as a part of Core Ads Engineering.
  - Build complex ML system to explore the optimal setup in Ads delivery with minimal input from Advertisers. Fastest growing Ads product in Meta's Ads history with nearly $3B Annual growth

- **Graduate Assistant(ML Expert)** — Miami, FL, USA
  *Florida International University* — *09/2018–04/2022*
  - Developed interpretable deep learning models for early cancer detection and drug recommendation using Keras, Tensorflow, GPU
  - Developed a deep learning based feature selection framework for high dimensional data e.g. (60k genomics, Brain fMRI image, Text). Selected features produced upto 98% prediction accuracy

- **Instructor (Lab)** — Doha, Qatar
  *Qatar University* — *02/2017–07/2018*
  - Taught Object oriented languages: python and C++; Developed deep learning based sleep stages classifier based on patients brain signal

- **Software Engineer (Part-time)** — Saudi Arabia
  *King Fahd University of Petroleum & Minerals* — *01/2015–12/2016*
  - Implemented LSTM based sentiment analysis tool to analysis the customer feedback with 98% accuracy

- **Software Engineer** — Bangladesh
  *Softwindtech Ltd.* — *07/2012–07/2014*
  - Design and developed 10+ scalable and high available web applications
  - Collaborated with other engineers to identify and alleviate number of bugs and errors in different software

## Educations

- **Florida International University (FIU)** — Miami, FL
  *PhD in Computer Science* — *08/2018–04/2022*
- **King Fahd University of Petroleum & Minerals (KFUPM)** — Saudi Arabia
  *Masters in Computer Engineering* — *08/2014–12/2016*
- **Dhaka University of Engineering and Technology (DUET)** — Bangladesh
  *Bachelor in Computer Science and Engineering* — *01/2007–01/2012*

## Certifications

- **Google**: End-to-End Machine Learning with TensorFlow on Google Cloud Platform (Issued: March, 2020)
- **University of Illinois Urbana-Champaign**: Cloud Computing Concepts: Part 1 & 2 (Issued: April 2015)

## Awards Received

- **Champion**: 2nd GCC Robotics Challenge at Qatar, 2017. Organized by IEEE and IET
- **Conference Travel Fellowships**: 10th ACM BCB, NY, USA, 2019; IEEE BIBM; San Diego, USA, 2019, 2020 (remote)

## Selected Publications

- **Al Mamun, A.**, Tanvir, R.B., Sobhan, M., Mathee, K., Narasimhan, G., Holt, G.E. and Mondal, A.M., 2021. Multi-run Concrete Autoencoder to Identify Prognostic lncRNAs for 12 Cancers. International Journal of Molecular Sciences, 22(21), p.11919. (Impact Factor 5.92)
- **A. Al Mamun**, M. Sobhan, R. B. Tanvir, C. J. Dimitroff and A. M. Mondal,"Deep Learning to Discover Cancer Glycome Genes Signifying the Origins of Cancer," 2020 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Seoul, Korea (South), 2020, pp. 2425-2431.
- **A. A. Mamun**, W. Duan and A. M. Mondal, "Pan-cancer Feature Selection and Classification Reveals Important Long Non-coding RNAs," 2020 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Seoul, Korea (South), 2020, pp. 2417-2424.
- **A. Al Mamun** and A. M. Mondal, "Feature Selection and Classification Reveal Key lncRNAs for Multiple Cancers," 2019 IEEE International Conference on Bioinformatics and Biomedicine (BIBM), San Diego, CA, USA, 2019, pp. 2825-2831.
- **Al Mamun, A.**, Mohammad Tariq Nasir, and Ahmad Khayyat. "Embedded System for Motion Control of an Omnidirectional Mobile Robot." IEEE Access, vol. 6, pp. 6722-6739, Jan 2018. (Impact Factor 3.36)
- M. H. Al-Meer and **Al Mamun, Abdullah** "Deep Learning in Classifying Sleep Stages," 2018 Thirteenth International Conference on Digital Information Management (ICDIM), Berlin, Germany, 2018, pp. 12-17.
- AlSaad, Rawan, Somaya Al-Máadeed, **Abdullah Al Mamun**, and Sabri Boughorbel. "A Deep Learning Based Automatic Severity Detector for Diabetic Retinopathy." In International Conference on Machine Learning and Data Mining in Pattern Recognition, pp. 64-76. Springer, Cham, 2018.
- **Al Mamun, Abdullah** Fahim Djatmiko, and Mridul Kanti Das. "Binary multi-objective PSO and GA for adding new features into an existing product line." In 2016 19th International Conference on Computer and Information Technology (ICCIT), pp. 581-585. IEEE, 2016.

## FAQ

**Are you authorized to work in United States?**
Ans: Yes

**Do you now or future need sponsorship?**
Ans: No, I have Green Card

**Are you open to relocate?**
Ans: Yes, anywhere in US.

**What is your expected salary?**
Ans: If you give me a range, I can tell you whether it works for me.

**What are your strongest programming languages? (strongest to least strongest)**
Ans: Python, C++

**What are some tools you use on a day to day basis?**
Ans: PyTorch; Pandas; Linux; sk-learn; Jupyter notebook

**In one line, what is your technical area of expertise?**
Ans: Personalized recommendation using deep learning for billions of users; Deep learning model interpretation; Feature Selection.

**What are the main technical responsibilities of your most recent project/role? Please explain.**
Ans: My responsibility includes 1. Conducting hypothesis oriented offline/online experiments 2. Deep learning based model building for personalized recommendations 3. Run and test a models on a parallel computing platform such as GPU 4. Calibration analysis 5. Publish and deploy models on the web 6. A/B testing; Model deployment; and monitoring

**In current role, what percent of your time is spent Coding? Testing? Designing? Documenting? Management? Etc.**
Ans: 20%-Hypothesis analysis, 30%–Coding; 30%-Offline/online experiments; 10%-Documenting; 10%-Mentoring

**What is the most challenging technical problem you had to solve and how did you accomplish it?**
Ans: To improve personalized prediction for a specific vertical, I introduced specialized gated module(new architecture of a DL model) that reduces the training cost at the same time increases the normalized entropy for the vertical.