

# Nazmus Shakib Shadin

## Curriculum Vitae

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### Education

- Fall 2024– Present **Doctor of Philosophy (Ph.D) in Computer Science**, Kennesaw State University, Marietta, Georgia, United States of America,  
*Ongoing GPA: 4.00 out of 4.00*
- 2017–2022 **Bachelor of Science (B.Sc.) in Computer Science and Engineering**, Ahsanullah University of Science and Technology, Dhaka, Bangladesh,  
*CGPA: 3.483 out of 4.00*

### Publications

- 2025 **Nazmus Shakib Shadin**, Xinyue Zhang, Jingyi Wang, Miao Pan. Heterogeneity-Aware Private Personalized Federated Learning for Medical Imaging via Contrastive Distillation, Accepted in 2025 IEEE International Conference on Big Data (BigData) as Regular Main Track Paper (Acceptance rate: 18.7%)
- 2025 **Nazmus Shakib Shadin**, Nasim Ahmed, Md Mahedi Hassan, Rifatul Islam, and Xinyue Zhang. YouKnowWho: Interpretable Framework for Classifying the Gender from Behavioral Motion Data in Extended Reality (XR), **10.1145/3704413.3765309**. Accepted in The Twenty-sixth ACM International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc '25.)
- 2025 **Nazmus Shakib Shadin** and Xinyue Zhang. FedKDShap: Enhancing Federated Learning via Shapley Values Driven Knowledge Distillation on Non-IID Data, **10.1145/3701716.3717645**. Published in Companion Proceedings of the ACM Web Conference 2025 (WWW Companion '25), Sydney, NSW, Australia.
- 2022 **Nazmus Shakib Shadin**, Silvia Sanjana, Nusrat Jahan Lisa. Covid-19 Detection from Lung CT Scan using Transfer Learning Models, **10.1007/978-3-031-17181-9\_5**. Published in Springer Communications in Computer and Information Science Series (CCIS, volume 1550).
- 2022 **Nazmus Shakib Shadin**, Silvia Sanjana, and Daiyan Ibrahim. Face Mask Detection using Deep Learning and Transfer Learning Models, **10.1109/ICISET54810.2022.9775925**. 2022 International Conference on Innovations in Science, Engineering and Technology (ICISET).
- 2022 **Nazmus Shakib Shadin**, Silvia Sanjana, Sovon Chakraborty, and Nusrat Sharmin. Performance Analysis of Glaucoma Detection using Deep Learning Models, **10.1109/ICISET54810.2022.9775828**. 2022 International Conference on Innovations in Science, Engineering and Technology (ICISET).
- 2021 **Nazmus Shakib Shadin**, Silvia Sanjana, and Nusrat Jahan Lisa. Covid-19 diagnosis from chest x-ray images using convolutional neural network(cnn) and inceptionv3, **10.1109/icit52682.2021.9491752**. In 2021 International Conference on Information Technology (ICIT), pages 799–804, 2021.

- 2021 FM Javed Mehedi Shamrat, Sovon Chakraborty, Md Masum Billah, Moumita Kabir, **Nazmus Shakib Shadin**, and Silvia Sanjana."Bangla numerical sign language recognition using convolutional neural networks", **10.11591/ijeecs.v23.i1.pp405-413**. Indonesian Journal of Electrical Engineering and Computer Science, 2021.
- 2021 **Nazmus Shakib Shadin**, Silvia Sanjana, and Mayisha Farzana. Automated detection of covid-19 pneumonia and non-covid-19 pneumonia from chest x-ray images using convolutional neural network (cnn), **10.1109/icitech50181.2021.9590174**. In 2021 2nd International Conference on Innovative and Creative Information Technology (ICITech), pages 57–63, 2021.
- 2021 Silvia Sanjana, **Nazmus Shakib Shadin**, and Mayisha Farzana. Automated Diabetic Retinopathy Detection using Transfer Learning Models, **10.1109/ICEEICT53905.2021.9667793**. 2021 5th International Conference on Electrical Engineering and Information Communication Technology (ICEEICT).

## Work Experience

- August 2024 to Present **Graduate Research Assistant, AIPo Lab, Kennesaw State University**
- Optimize decentralized learning environments with heterogeneous data and models.
  - Develop energy-efficient strategies for heterogeneous Federated Learning (FL).
  - Apply knowledge distillation (KD) to improve computational efficiency in FL.
  - Investigate and Experiment techniques for reducing model size while maintaining performance metrics.
  - Utilize feature importance to optimized KD Loss function using Shapley Values.
  - Develop techniques ensuring secure and efficient privacy-preserving AI systems.
- August 2022 to July 2024 **Software Development Engineer-I, IQVIA**
- Part of the PADDS (Processing and Data Delivery System) Implementation Team at IQVIA
  - Developed and optimized data-driven solutions for pharmaceutical and healthcare analytics.
  - Implemented data processing workflows and predictive analytics using Python, PowerBuilder.
  - Developed machine learning, deep learning, and transfer learning techniques for predictive analytics.
  - Contributed to full-stack development for PADDS using ASP.NET, TypeScript, and JavaScript.
  - Integrated web services for seamless data communication.
  - Worked with SQL, Sybase, and Exasol for large-scale database management.
  - Optimized data retrieval and processing for high-performance applications.
  - Worked with cloud platforms such as Azure, AzureML, Azure DevOps etc.
- January 2022 to August 2022 **Software Developer Intern, IQVIA**
- Gained hands-on experience in designing and optimizing data-driven solutions.
  - Learned data warehousing techniques and business intelligence (BI) tools for decision-making.
  - Worked with SQL, focusing on data modeling and performance tuning.
  - Developed automation scripts to streamline workflows and improve system efficiency.
  - Gained practical experience with SSIS (SQL Server Integration Services) for ETL processes.
  - Applied project management methodologies to contribute effectively to real-world applications.

## Technical Skills

- Languages **Python, C, C++, Java, JavaScript, TypeScript, SQL, PL/SQL, C#**
- Cloud **Azure, Azure ML, Apache Spark, Azure DevOps, Databricks**
- Database **PostgreSQL, MySQL, Exasol, Sybase, SQL Server**
- Frameworks **ASP.NET, ASP.NET Core, VBA, PowerBuilder, PowerScript, TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV, YOLOv8, GraphViz, Pandas, NumPy, Matplotlib, Seaborn, Power BI, Git, SSIS**

## Undergraduate Research

Ahsanullah University of Science and Technology, Dhaka, Bangladesh

Title: **A Comparative Study of Diabetic Retinopathy Detection using Machine Learning and Deep Learning architectures.**

Used six deep learning and machine learning models to detect the Diabetic Retinopathy efficiently with the retinal fundus image using digital image processing. **[Github Repository](#)**  
Supervisor: **Dr.-Ing. Nusrat Jahan Lisa**, Assistant Professor, Department of Computer Science and Engineering, Ahsanullah University of Science and Technology

## Projects

- 2021 **Sentiment Classification from Tweeter Data using Bi-directional LSTM.** NLP based project that applies to classify sentiment of a person using the Tweeter based data using Bi-directional LSTM. **[Github Repository](#)**
- 2021 **Door Step Pharmacy.** Distributed Database Management System based in "PL/SQL" Language, and Run in CLI. **[Github Repository](#)**
- 2020 **Online Disease Checker and Medical Support (ODCMS).** Developed In Microsoft Visual Studio 2019 using asp.net, C#, JavaScript, and CSS. **[Github Repository](#)**
- 2020 **Pharmacy Management System.** Developed In Microsoft SQL Server and NetBeans using SQL and JAVA. **[Github Repository](#)**
- 2020 **Learn-C.** An android app developed in Android Studio 4.0.1 using JAVA. **[Github Repository](#)**
- 2019 **Media Player.** A desktop app developed in NetBeans using JavaFx. **[Github Repository](#)**

## Professional Certification

- DP-100: Microsoft Certified: Azure Data Scientist Associate. **Credential Badge**
- AI-900: Microsoft Certified: Azure AI Fundamentals. **Credential Badge**
- AZ-900: Microsoft Certified: Azure Fundamentals. **Credential Badge**

## Honors and awards

- Dean' 4.0 Kennesaw State University - (CCSE) College of Computing and Software Engineering Got 4.0 Club - Fall **out of 4.0 and listed in Dean's 4.0 Club.** Awarded on December 2024. Credential ID: 2024 a1BRH6CrQ1G8bMhusSiyTA. **Credential Badge**
- Scholarship Associated with Ahsanullah University of Science and Technology. Got a 50 percent Tuition - Spring **Scholarship from Ahsanullah University Of Science And Technology for attaining 2020 a place among the top 5 percent of students.**

## References

### Dr. Xinyue Zhang

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Department of Computer Science  
Kennesaw State University,  
USA  
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### Dr. Nusrat Jahan Lisa

Assistant Professor,  
Department of ECE  
North South University,  
Bangladesh  
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