Ananda Mohon Ghosh
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[LinkedIn](#) | [GitHub](#) | [Google Scholar](#)

Software Development Engineer

A motivated software engineer and research enthusiast, willing to accept new challenges in academia to achieve success in the cutting-edge projects. I have been successful in the industry because my ability to follow through and communicate frequently with team members. Applies knowledge in Cloud systems, IoT, Machine Learning, AWS, software system design, test driven development, and production level work to improve business outcomes. I am continually focused on quality and results to exceed goals.

PUBLICATIONS | [Google Scholar](#) | 470+ Citations

- **Ghosh, A.M.** and Grolinger, K., 2020. Edge-cloud computing for Internet of Things data analytics: Embedding intelligence in the edge with deep learning. *IEEE Transactions on Industrial Informatics*, *17*(3), pp.2191-2200.
- Fekri, M.N., **Ghosh, A.M**. and Grolinger, K., 2019. Generating energy data for machine learning with recurrent generative adversarial networks. *Energies*, *13*(1), p.130.
- **Ghosh, A.M.** and Grolinger, K., 2019, May. Deep learning: Edge-cloud data analytics for IoT. In *2019 IEEE Canadian Conference of Electrical and Computer Engineering (CCECE)* (pp. 1-7). IEEE.
- **Ghosh, A.M.**, Halder, D. and Hossain, S.A., 2016, May. Remote health monitoring system through IoT. In *2016 5th International Conference on Informatics, Electronics and Vision (ICIEV)* (pp. 921-926). IEEE.

Education
PhD in Software Engineering (2028)
McMaster University, Hamilton, ON, Canada

MSc. in Software Engineering, Specialized on ML and AI
Western University, London, ON, Canada (2020), 3.9(4)
Thesis: *Edge-cloud computing for Internet of Things data analytics: Embedding intelligence in the edge with deep learning*

BSc. in Computer Science and Engineering
Khulna University, Khulna, Bangladesh (2015), 3.39(4)
Thesis: *Remote health monitoring system through IoT*

Work Experience

CAPITAL ONE BANK | Toronto, ON   **September 2021–August 2024**
Senior Software Engineer
- Lead the migration of dPOI service, a core service in KYC from non-serverless EC2 service to serverless ECS Fargate based AWS service. A quantity of 350K user data also migrated from Gen 1 AWS to Gen 3 account.
- Lead 2, and co-lead 1 Technical Resiliency Exercise practice in production environment (TREx) among enterprise-wide event and successfully proven the resiliency of the production system during disaster.
- Design and write end to end microservice for identity verification platform for reconciliation mechanism, writing Unit and Integration test for the service. Produced a successful production deployment of this service.
- Co-lead the development, test of OOW project, was migrated from Java to Golang and Lambda service.
- Modification of async thread-based bureau verification process to reduce the verification time to 18 sec to around 9.5 sec for each user.

- Design and Implement of Data Obfuscation mechanism, an Enterprise tech block, for dPOI system to obfuscate customer data on a scheduler basis.
- Successfully fix defects assigned to our scrum team and worked multiple enterprise and card tech blockage.

DELOITTE | Montreal, QC   **January 2021–August 2021**
Solution Developer
- Collaborated on developing data pipelining for BP and manage the provisioning of the data stream to the source the destination over landing and staging.
- Developed Querying and Packaging libraries for transmission from source system to landing and then staging tables for BP and Cost Center (CC).
- Designed and developed the fuzzy match and merge algorithm for Informatica which helped find the duplicate data and extract the golden value from the redundant data using that match and merge system.

WESTERN UNIVERSITY | London, ON   **May 2018–June 2020**
Research Assistant ML
- Demonstrated solid skills by structuring and prototyped development for edge-based ML on IoT sensor data targeted to reduce the data latency through the transmission channel (almost 60% reduction).
- Achieved noteworthy success in a cutting-edge energy consumption prediction system through deep learning for balancing the supply and demand.
- Artificial data was created through the Generative Adversary (GAN) for fixing the major class imbalance problem which was available in the existing system in energy prediction with a local Company.

DIZINOVA | Dhaka, Bangladesh   **June 2016–April 2018**
Software Engineer
- Contributed to developing Business Intelligence and Service Layer of the ERP software product Ranger Complaint System, offline data sync for Tablet and PDA devices through RestAPI to Azure.
- Demonstrated excellent skills developing a multilayer framework for a startup project dizicashier in .Net Core 2.0, with Restful WebAPI and Angular frontend also designed the Database system of the application.
- Integrated the permission management in the backend, and OAuth based authorization management from the view layers of Solpay, a payroll application widely used in Australia.

AMREEN IT | Khulna, Bangladesh   **Nov 2014–May 2016**
Software Developer Intern
- Google Map and Distance matrix API implementation and embedding in the site for location identification for a car reselling website and its content management and admin panel permission management.
- Laravel Framework based Web API development for iOS data loading and synchronization with CMS.
- Demonstrated excellent knowledge in Android app development for the business application and data synchronization from API and CMS Application.

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Skills
Teamwork | Leadership | Individual thinker | System Design | Detail Oriented | Problem Solver
Software Development | Implementation | Testing | Quality Assurance | Technology Solutions
Java | **Python** | **C++** | C# | Shell Script | PostgreSQL | MS SQL Server | Aurora DB | Dynamo DB
Spring | Spring Boot | Django | JUnit | Jest | ASP.NET | MVC6 | .NET Core 2 | Angular JS
Integration Test | Unit Test | Restful API | Microservice | Web Service | Dev Exchange | API Virtualization
AWS | Lambda | EC2 | ECS Fargate | VPC | IAM | Security Groups | Amazon S3 | SNS | SQS | CloudWatch
ORM | Entity Framework | Hibernet | JDBC | Spring JPA | OOP | TDD | OAuth2 | UNIX | Docker | Kubernetes
Jenkins | Git | SVN | Agile | Scrum | Jira | Confluence | Splunk | Chambers | Kafka | Maven | CI/CD

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Certification
Microsoft Azure Cloud Certification (AZ-900)
AWS Certified Solution Architect

References
Richard Paige, PhD, Professor, McMaster University, Hamilton, ON, Canada
Katarina Grolinger, PhD, Associate professor, Western University, London, ON, Canada